CHARRAS

ROYAL
PHARMACOPOEA

1678

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CHARAS, M.

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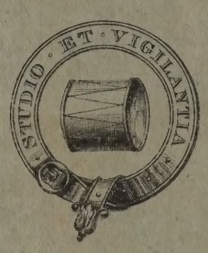

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THE
Royal Pharmacopœa,
GALENICAL
AND
CHYMICAL,

According to the

PRACTICE

Of the Moſt Eminent and Learned

PHYSITIANS

OF

FRANCE,

And Publiſh'd with their ſeveral Approbations.

By MOSES CHARRAS, the Kings Chief Operator in his Royal Garden of Plants.

Faithfully Engliſhed.

Illuſtrated with ſeveral Copper Plates.

LONDON:

Printed for *John Starkey* at the Miter within *Temple-Bar*, and *Moſes Pitt* at the *Angel* in St. *Pauls Church-Yard*, 1678.

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THE

Royal Pharmacopœa,

GALENICAL

AND

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According to the

PRACTICE

Of the Most Eminent and Learned

PHYSITIANS

OF

FRANCE.

Wellcome Library

By NICHOLAS CULPEPER, Gent. Student in Physick, and Practitioner in the Royal Colledge of London.

Illustrated with several Copper Plates.

LONDON:

Printed for Peter Dring, at the Mitre within Aldersgate, and Nicholas Culpeper at the Angel in St. Laurence Church-Yard, 1679.

The Approbation of *Monsieur Anthony D'Aquin*, Counsellor in Ordinary to the King in his Councils, and First Physitian to his Majesty.

NOT believing that it could be honourable for France, *at a time when by the care and liberality of one of the most famous Monarchs in the World, all Arts and Sciences have attain'd their utmost perfection, that Physick, otherwise in high esteem, should be beholding to forreign* Pharmacopœa's *for the preparation and use of such Medicines which are daily requisite to be prescrib'd, I thought it expedient, not only to cause Monsieur* Charras *to make such* Galenical *and* Chymical *Operations and demonstrations every year in the* Royal Garden, *as should be necessary for the instruction of young beginners in Physick; but also to give him the plat-form and design of a* Galenical *and* Chymical Pharmacopœa, *whereby the preparation of ordinary Medicines should be corrected from several faults, the number and goodness of particular remedies be repaid with interest to Strangers, from whose Works we have hitherto borrow'd, and the Publick be stor'd with advantage for the ease and cure of those maladies that afflict Human Nature. And finding that Monsieur* Charras *has very worthily acquitted himself of his charge, and fully satisfi'd me in my design, I willingly and freely give him my approbation. From the Camp at* Quaivrain, *the 29th of* June, 1676.

D'AQUIN.

The Approbation of *Monsieur de la Chambre*, Counsellor to the King in his Councils, Physitian in Ordinary to His Majesty, and First Physitian to the Queen.

IN regard that to this present time there has been no perfect Pharmacopœa, *we cannot sufficiently praise those that make it their study: And we have great reason to hope that this of Monsieur* Charras *will contribute very much to that perfection which is wanting, since that besides the diligent inquisition which he has made after what has been most exactly written, he has highly better'd the ordinary preparation of Remedies, added a great number of particular Receipts, and made a most necessary Union of the two* Pharmacies, *by a clear and intelligible explanation. So*

that this Work merits esteem, and cannot but be very advantageous to those who have any insight in Physick. This is the testimony which we thought our selves bound to give him in publick. From St. Germains en Laye, July 13. 1676.

LA CHAMBRE.

The Approbation of *Monsieur de Renaudot*, Counsellor to the King in his Councils, and First Physitian to *Monsieur* the *Dolphin*, and Doctor Regent in Physick of the Faculty at *Paris*.

THE Author of this ample and Royal Pharmacopœa, *has not only made a faithful Collection of the most Important Medicines; but he has set them down so elegantly, and argues with so much force and clearness of wit, that it may be easily discern'd that he has not only been content to borrow from the most worthy Chief, and Head of Physick, the best part of the Remedies which he makes use of; but that he has also very happily employ'd his own judgment to embellish his own Work. He unfolds the difficulties which he meets with in reconciling* Galenick *and* Chymical *Medicines, which formerly seem'd incompatible, considering the different manners of their Choice, Preparation, and Composition, that there is no person who may not receive full instruction from thence, and who will not allow him to be one of the most famous Artists of his Age. This is the real opinion which I the first Physitian to Monsieur the* Dolphin, *Doctor Regent in Physick of the Faculty of* Paris, *have of this Book, upon a serious consideration, and of which I thought my self bound to give a publick confirmation. From the Castle of St.* Germain en Laye, July 10. 1676.

EUSEBIUS RENAUDOT.

The Approbation of *Monsieur Esprit*, Counsellor to the King in his Councils, and First Physitian to *Monsieur*, the Kings only Brother.

THE Galenical *and* Chymical Royal Pharmacopœa, *is a work of a solid wit, very clear, and full of all the reflexions that can be made upon the two Pharmacies. The precepts of both the one and the other are handled here with so much method and order, so much neatness, and with so many learned and new Remarks, that I find nothing wanting for*

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the absolute perfection of the work. The Author has attain'd it, by his study, by the labour of several years, and by the vast experience he has had, by the strength of his reason, and deep meditations upon the choice, preparation and composition of Remedies. So that we may say, that his Pharmacopœa *is truly Royal; that there is nothing defective in it, nothing superfluous; that the beauties of it are singular, and not to be discover'd in any of the ancient or modern* Pharmacopœa's, *as much esteem'd, and as much in use as they are. Therefore does this Work deem to be made publick in the Reign of one of the most Renowned of our Kings, and under the protection of one of his most principal Ministers, so zealous in every thing that concerns the advancement of Arts in this Kingdom, and the publick benefit; to which this* Pharmacopœa *is absolutely necessary, and will be always very advantageous.* Paris, July 12. 1676.

The Approbation of the Dean and Doctors of the Faculty of *Physick* in the University of *Paris.*

WE the Dean and Doctors of the Faculty of Physick in the University of Paris, *having heard the report of Mr.* Anthony Morand, Peter Cresse, Lewis Gallais, *and* Peter D'Aquin *Doctors of the same Faculty, and deputed by the same to read a Book entituled* Pharmacopée Royale, Galenique & Chymique, *composed by* Moses Charras, *Apothecary, Artist of the King in his Royal Garden of Plants. That the said Work may be accompted one of the most accomplish'd pieces that has appear'd upon the subject, that the discourse is polite, the method easy, that it contains all the marrow of the Ancients, and the best of what has been discover'd of later Ages; that the Author has inserted several learned Arguments, and judicious reflexions; and lastly, that he was worthy the support and care of Monsieur the King's chief Physitian, by whose order he has undertaken it, and reform'd a great number of good Medicines. For these reasons, we by common consent have thought it convenient to be made publick, acknowledging that it will be very necessary for all those persons that give their minds to the study and exercise of Physick. In testimony whereof we have sign'd these presents.* Paris, July 12. 1676.

A. J. Morand, *Dean.*

The

The Approbation of Monsieur *Fagon*, Counsellor to the King, Physitian in Ordinary to the Queen, and Professor in *Pharmacy* at the *Garden Royal.*

Monsieur Charras *in this* Pharmacopœa *has made so exact a Collection of all that the Ancients and Moderns have afforded profitable or curious in reference to Physick, that they who shall read this, may spare themselves the pains of reading any other; and they will find without all question, considering the labour of compiling, the method and neatness of the Work, that it answers to the Grandeur of the Title, and the Reputation of the Author.* Paris, July 13. 1676.

Physick Books Printed for *John Starkey*, at the *Miter in Fleetstreet*, near *Temple-Bar*.

1. *Basilica Chymica, and Praxis Chymiatricæ*, or *Royal* and *practical Chymistry*, in three Treatises. Wherein all those excellent Medicines, and Chymical Preparations, are fully discover'd, from whence our Modern Chymistry have drawn their choicest remedies; being a Translation of *Oswald Crollius* his famous *Chymistry*; augmented and inlarged by *John Hartman*. To which is added his Treatise of *Signatures of Internal things*, or a true and lively Anatomy of the greater and lesser World. As also the *practice of Chymistry* of *John Hartman*, M.D. augmented and inlarged by his Son, in *Folio*. price bound 10 *s.*
2. *The Art of Chymistry*, as it is now practised; written in *French*, by *P. Thybault*, Chymist to the *French* King, and english'd by *W. A.* Doctor in Physick, and Fellow of the Royal Society, in *Octavo*. Price bound, 3 *s.*
3. *Medicina instaurata*, or a brief account of the true grounds and principles of the *Art of Physick*, with the insufficiency of the vulgar way of preparing Medicines, and the excellency of such as are made by *Chymical Operation*; by *Edward Bolnest*. Med. Lond. in *Octavo*. price bound. 1 *s.*
4. *Aurora Chymica*, or a rational way of preparing *Animals, Vegetables, and Minerals*, for a *Physical use*, by which Preparation they are made most efficacious, safe and pleasant Medicines, for the preservation of the life of Man, By *Edward Bolnest*, Med. Reg. Ord. in *Octavo*. Price bound, 1 *s.* 6. *d.*
5. *The Chyrurgeons Storehouse*, furnished with *forty three Tables* cut in *Brass*, in which are all sotts of *Instruments* both ancient and modern, useful to the performance of all Manual Operations; with an exact description of every *Instrument*, together with *one hundred choice observations* of famous *cures* performed, with three Indexes. 1. Of Instruments; 2. Of Cures performed; 3. Of things remarkable: written in *Latin* by *Johannes Saultetus*, a famous *Physitian* and *Chyrurgeon* of *Vlme* in *Suevia*, and faithfully englished by *E. B.* Dr. of *Physick*. In *Octavo*. Price bound 8 *s.*
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7. *Medicina Statica*, or *Rules of Health*, in eight sections of Aphorisms, Originally written by *Sanctorius* chief Professor of *Physick* at *Padua*. Englished by J. D. in *twelves*. Price bound, 1 *s.*
8. *Pharmacopoeia Colegii Regalis Londini*. in folio. Price bound 8 *s.*
9. The *Compleat Chymist*, or a new Treatise of *Chymistry*, teaching by a short and easy method, all its most necessary Preparations; written in *French*, by *Christopher Geasor*, Apothecary in Ordinary to the *French King*, and the Duke of *Orleans*; and from the fourth Edition Revised and Augmented by the Author: now faithfully *English'd* by a *Fellow* of the *Royal Society*; *Illustrated with Copper Plates*. In *Octavo*. Price bound 3 *s.* 6 *d.*

Phyſick Books ſold by *Moſes Pitt* at the *Angel* in St. *Paul's Church-yard*, 1678.

Pharmacopée Royale, Galenique & Chymique, par Moyſe Charras, quarto, 1676.

Mayerne *de Arthritide, acceſſerunt ejuſdem conſilia aliquot medicinalia*, octav. 1 s.

A Compleat Treatiſe of Chirurgery, containing *Barbet's* Chirurgery; *Minderus* of diſeaſes incident to Camps and Fleets, with a Chirurgeon's Cheſt of Medicines and Inſtruments, *octav.* 6 *s.*

A new way of curing the Gout by burning with *Moxa*: With obſervations and practices relating to women in Travel, *octav.*

Pet. Paw *de Oſſibus*, quart. 5 s.

Pharmacopœa Hagienſis, quart.

Kerkringii *Spicilegium Anatomicum, continens obſervationum Anatomicarum rariorum centuriam unam nec non oſteogeniam fœtuum in qua quid cuiq; oſſiculo ſingulis accedat menſibus, quidve decedat & in eo per varia immutetur tempora, accuratiſſime oculis ſubjiciuntur*, 1670. quart.

Fortunius Licetus de monſtris ex recenſione Gerardi Blaſii, *qui monſtra quædam nova & rariora ex recentiorum ſcriptis addidit. Editio noviſſima iconibus illuſtrata*, 1665. quart.

Baſilius Valentinus of natural and ſupernatural things; alſo of the firſt tincture, root, and ſpirits of Metals and Minerals, how the ſame are conceived, generated, brought forth, changed and augmented. Whereunto is added *Frier Bacon* of the medicine of tincture of *Antimony*; Mr. *John Iſaac Holland* his works of *Saturn*, and *Alexander van Suchten*, of the ſecrets of *Antimony*, out of *Dutch*, 1671. *octav.* 2 *s.*

An Eſſay about the origen and vertues of Gems, by the Honourable *Robert Boyl*, 1 *s.* 6 *d. Idem Lat. duodec.* 1 *s.*

Dr. *Lower de Corde*, Amſterd. 1671. *octav.* 3 *s.*

Dr. *Grew's* Anatomy of Vegetables, 1672. *octav.* 2 *s.*

Eugelenus de Scorbuto, octav.

Fred. Deskeri *Exercitationes Medicæ*, octav.

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Mr. *Boyle* of hidden qualities of the Air, againſt *Hobs*; and of attraction by ſuction, *octav.* 2 *s.* 6 *d.*

Primeroſe *Ars Pharmacentica*, duodec.

Swalve *Alſali*, duodec.

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Ottonis Jachenii Hippocratis Chymicus, 1671. duodec.

Theodori Kerckringii, D. M. *commentarius in currum triumphalem Antimonii Baſilii Valentini a ſe latinitate donatum*, 1671. duodec.

Franciſci Redi *experimenta circa res diverſos naturales, ſpeciatim illas quæ ex Indicis adferuntur*, 1675. duodec.

The ſix Travels of *John Baptiſta Tavernier*, Baron of *Aubonne*, through *Turky* and *Perſia* to the *Indies*, during the ſpace of forty years. Giving an account of the preſent State of thoſe Countreys, *viz.* of their Religion, Government, Cuſtoms and Commerce. As alſo the Figures, Weights, and Value of the Money and Coins ſeverally currant therein. The Second Part, deſcribing *India*, and the *Iſles* adjacent.

THE

THE Royal Pharmacopœa, GALENICAL AND CHYMICAL.

THE FIRST PART.

Concerning the Generalities of Pharmacy.

CHAP. I.

Of the Definition and Names both of the one and the other Pharmacy.

PHARMACY is the second part of that part of *Physick* that attends the Cure of Diseases, and teaches the Choice, Preparation and Mixture of Medicaments. This Definition might suffice, did we not know of any other *Pharmacy* then that of the Ancients, which is call'd *Galenic*. But in regard the *Chymical Pharmacy* of the Moderns has many perfections that are peculiar to it, and that thereby the benefit of the *Galenic* is much improv'd, it deserves to have a particular Definition. I will say then, without swerving from the first general Definition, that *Chymical Pharmacy* ought to be defin'd to be, An Art which teaches us to dissolve bodies, and by the same means to divide and know the parts of which they are compos'd, to the end we may separate the bad, and preserve the good, and unite them again when occasion requires. For,

Dividit ut purget, purúmq; exaltet, & arctet.

The Name of *Pharmacy*, which is common to both, is derived from the *Greek* word Φάρμακον, which signifies a *Medicine*, in regard it is the work of both to compose Medicines. The word Φάρμακον is compounded of φέρω and ἄκος, as one should say, *I bring a Remedy*. We call the *Galenic Pharmacy*, which has been very ancient, that which was known and practis'd by the *Greeks*, *Romans* and *Arabians*, which has been very much improv'd by *Galen* and his Followers, and to this day is very much in esteem. We call the *Chymical Pharmacy*, that which was not known but to some few of the Ancients; but which at present is very much approv'd and practis'd by a very great number of the Moderns, who have made it their study, and by their continual Industrie have brought to light, and unfolded many Mysteries that lay before conceal'd in riddles, and by that success have encourag'd others to follow their example.

The moſt receiv'd Etymology of the word *Chymiſtrie*, is that which is deriv'd ἀπὸ τ χυμοῦ, *from Juice*, in regard it teaches how to extract the moſt pure and liquid parts of Compounds, and to ſeparate them from thoſe parts which are more impure and groſs. Others derive the word from χέω, to melt or diſſolve; from whence they alſo fetch the word χύμεια, which ſome Lexicons expound to be a *Melting* or preparation of Gold and Silver, being ſubſtances upon which *Chymiſtrie* practiſes a vaſt number of preparations. The Name of *Alchymie*, which ſome have attributed to *Chymiſtrie*, is deriv'd from the *Arabick* word *Al*, which ſometimes ſignifies the Excellencie of a thing, and ſometimes *Salt*; in which ſence it may ſignifie a diſſolving or preparation of Salt, which is one of the moſt eſſential parts of *Mixture*.

Others have ſtil'd *Chymiſtrie* the *Hermetic ſcience*, alledging without ground that *Hermes* was the Inventor thereof, to whom for that reaſon they gave the Name of *Triſmegiſtus*, or *Thrice great*. Some, not improperly, have call'd it the *Art Diſtillatorie*, in regard that it accompliſhes many of its operations by Diſtillation. *Paracelſus* and ſeveral others have nam'd it *Spagyric Pharmacy*, which is a compoſition of two *Greek* words σπᾶν, *to ſeparate*, and ἀγείρειν, *to gather together*; for it ſeparates the pure from the impure, and unites and gathers together the pure parts, when the impure are ſeparated from them. I omit thoſe other Names which others have aſcrib'd to it, as *Pyrotechnie*, or *the Art of working by Fire*; the Sages or the *Philoſophers Art*; the Secret Art, and many other Names, which I paſs over in ſilence.

CHAP. II.

Of the Subject, Object and End of both the one and the other Pharmacy.

ALL natural things created may be compriz'd under the Name of Medicament; and they are equally the ſubject, and object both of the one and the other *Pharmacy*. So then I ſay, That Medicament is the general matter that a Student in *Pharmacy* ought to conſider, and know both externally and internally, and which he ought to underſtand how to prepare and mix as occaſion requires for the uſe of *Phyſick*. The exterior knowledge of Medicament is leſs difficult; becauſe, that I may ſpeak properly, it is onely ſuperficial: Nevertheleſs it does not want ſome difficulty, in regard of the largeneſs of its extent, and the vaſt variety of mixtures which are comprehended under the Name of Medicament. But the internal knowledge dives into all the parts, whereof Mixture or ſimple Medicaments are compounded. And this requires much more skill and experience than the former. Nor can it be obtain'd but by preparation, and by making an exact diſſolution of all the parts, which cannot be accompliſh'd without the help of *Chymical Pharmacy*.

Though the Body of Man be the remote object both of the one and the other *Pharmacy*, it ceaſes not however to be ſome part of its ſubject, in regard it affords parts which are in truth Medicaments, as the Brains, the Blood, the Fat, the Hair, *&c.* which a Student in *Pharmacy* ought to conſider, and underſtand how to prepare.

The end of a *Phyſician* is twofold, to underſtand the internal which is the true knowledge, and tends to the perfect preparation of Medicaments; and the external, which is the health of Man, for which the *Phyſician* chooſes, prepares, and mixes all his Medicines. The firſt may be alſo call'd the *Next End*; the other may be term'd the *Remote End*.

CHAP. III.

Of the Principles of Chymical Pharmacy.

WIthout making any ſtay upon the opinion of the Ancient Philoſophers, who founded the principles of all things upon the four Elements, which they affirm'd to be Air, Fire, Water and Earth, I take part with the Chymical Authors, ancient and modern, who acknowledge no other principles than thoſe which they meet with by Art in the diſſolution

lution of all Compounds. Plants, Animals, and Minerals, are equally compos'd of these principles, and we find them very distinctly in the resolution of their parts; especially of those whose substance is not extraordinarily compacted. These Principles consist in five different substances; of which the three principal are call'd *active Principles*; the other two of lesser note, *passive Principles*. The three first are called by the Names of Salt, Sulphur and Mercury, by reason of their agreement with Salt, Sulphur, and Mercury natural. They are called *active*, because they include within themselves, a quality, vertue or power that produces *action*. Salt is esteem'd to be the ground of all savours; Sulphur, of all odours, and combustibility; Mercury, of all colours. Flegm and Earth are the two last principles, which are said to be *passive*, as well to distinguish them from the former, as also for that they cannot produce any considerable action. They are also call'd Elementary principles, by reason of their conformity with Water and Earth, which were the grosser Elements of the Ancients.

In the distillation of Compounds, the insipid Flegm, which is like Water, appears usually first of all. Next to that comes the Spirit, to which we give the name of Mercury: In the third place appears the Oyl, which we call Sulphur. The Salt, under its own proper name, is found last of all, mix'd amongst the Earth; which remaining in the Filtre, after the separation of the Salt, is lookt upon as the last principle.

Nevertheless we find that the Salts of Animals and certain Creatures, rise in distillation among the other substances, and that in *Rectification* they also rise first, by reason of their great volatility, and that there remains but little fixed Salt among the terrestrial part which is found at the bottom after distillation. We also find many times that the Flegm, the Spirit, the Volatile Salt and the Oyl, rise in distillation confusedly together: and that you must of necessity have recourse to *Rectification* to separate and purifie them. But though Flegm and Earth are accounted *Passive principles*, and have less vertue than Salt, Sulphur and Mercury, which are the *Active principles*; yet are they not altogether to be despis'd. For besides the necessary rank which they hold in the composition of Medicaments, they have their particular vertues and uses, when they are separated from the other principles by distillation, or any other way of preparation. Which obliges me to discourse of them, as well as of the rest, according to their order in distillation.

CHAP. IV.

Of Flegm.

Flegm is a principle reputed to be passive, which most usually rises first in the distillation of Compounds: especially of such mixt bodies, wherein it abounds. They who agree the Elements to be principles, suppose Flegm to be the Element of Water; which it most resembles, when well separated from the rest of the principles. Flegm, though to outward shew it appear thin, and almost void of any consistency, is a substance which most abounds in the composition of mixt bodies; especially of Plants and Animals.

Flegm separated from the other substances of the mixt body, doth not lose its vertue. For it curbs the activity of the Spirits, and qualifies the acrimonie of the Salts, if united to them; it also serves to dissolve them, and all watry substances. It unites with the Oyls, by the help of the Salts. It is proper in the extraction of several Tinctures, especially of substances, to which it had been united. It is proper in several Fermentations, Distillations, Humectations, and several other Operations. It qualifies the heat of the Oyls; and binds and unites the Earth with the Salts, redressing the drieness and brittleness of the latter. It refreshes and moistens being alone; but easily receives the impressions of those substances with which it is mix'd; it easily corupts, when mix'd with moist substances that are strangers to it; and hastens their corruption and dissolution. But it may be preserv'd a long time alone in a bottle well-stopp'd. It soon evaporates in the open air, but sooner in the Sun or against the Fire. It usually observes the motion and action of the Spirits, Oyls or Salts, with which it is mix'd; and from which at all times it may with ease be separated. It ascends in distillation in clear clouds, which presently dissolve into water. In that it differs from the Spirits and Oyls, whose vapors or clouds are much thicker, and harder to be dissolv'd.

CHAP. V.

Of the Spirit.

THE Spirit, denoted by the Name of *Mercury*, is an airy, ſubtle, penetrating ſubſtance which uſually aſcends in diſtillation after the Flegm is rais'd. This Spirit is more or leſs ſubtle and penetrating, according to the nature of the mixt Bodies out of which it is drawn. For the Spirits of Vitriol, Salt, Nitre, and Sulphur, are much more piercing than that of Vinegar; and the Spirit of Vinegar much more penetrating than thoſe of Guiacum and Allum: and by conſequence a Spirit of more force and efficacy will act more powerfully than one which is weaker. The property of a Spirit is to penetrate, cut, and open compacted and ſolid Bodies. It eats, putrifies, breaks, diſſolves, and burns certain mixt Bodies. It coagulates others, as Blood and Milk, and ſeparates the terreſtrial from the watry parts. Certain Spirits being well purifi'd from their Flegm, and mingl'd with water, will cauſe a heat ſo vehement therein, that hardly a Man ſhall endure his hand in it: nor is it an eaſie matter to keep the Veſſels from breaking that contain it. The Spirit preſently extinguiſhes the flame of the Oyls; it joins immediately to the Salt, and ſometimes unites it ſelf ſo cloſely to it, that nothing but a violent Fire can ſeparate it. It heats of it ſelf, but being mingl'd with a ſmall quantity of cooling liquors, it augments their coolneſs, and cauſes them to penetrate. It dries alone, but moiſt'ns being mingl'd with Flegm, and helps to preſerve it. It gives it its own activity and ſtrength, according as it is mix'd with it, either in a greater, or leſſer quantity. It allays and qualifies the Acrimony of the Salts, and is by them reciprocally qualifi'd. It incorporates with them, and fixes their Volatility. It is us'd for Tinctures, and for diverſity of colours, which it changes, and ſometimes utterly deſtroys, according as it is us'd. It diſſolves Minerals, and precipitates thoſe that were diſſolv'd by their Salts. It ſerves for the nouriſhment of Plants and Animals, and gives motion to the latter. It diſſolves Stones, purifies the Blood; it reſtores and renews the radical moiſture. It reſtores the ſpeech to them that have loſt it. It cleanſes and purges, being mix'd with its Flegm. It kills all ſorts of Scurfs and Scabs; and aſſwages all ſorts of pains caus'd by the Salts. In ſhort, it will give conſiderable relief to an abundance of Diſtempers, eſpecially thoſe that proceed from the acrimony of Salts, if rightly order'd and preſcrib'd with judgment.

I refer the Volatile Urine Spirits, to the Chapter of Salt, as being more of the nature of Salt, than of the acid Spirit.

CHAP. VI.

Of Sulphur.

Sulphur, acknowledg'd to be the third Principle, is a homogeneous, liquid, oylie, viſcous and combuſtible ſubſtance, which in diſtillation aſcends uſually like Oyl after the Spirit; which being purifi'd from the terreſtrial and ſalt parts, is lighter than the Flegm, the Spirits, and all the other ſubſtances, ſo that it ſwims above them all; but while it ſtill contains thoſe parts of Earth and Salt, it ſwims between the other ſubſtances, or elſe it ſinks to the bottom, according as it is more or leſs intermixt. Sometimes alſo it happens, that one part of the Oyls ſwims above the Flegm, another part between it, and a third part falls to the bottom; as is often obſerv'd in the diſtillation of ponderous Woods. Sometimes likewiſe it happens, that the ſame compound Body yields Oyls diſtinct in colour, that ſwim one above another, as is obſerv'd in the diſtillation of Turpentine, where are to be ſeen Oyls of three different colours, that ſwim one above another; not to mention the Spirit, or rather Ethereal Oyl that ſwims above all the reſt. The viſcoſity of this Principle occaſions it eaſily to ſtick to thoſe ſubſtances that riſe with it in diſtillation; and particularly to the Salts, or to ſome other groſs and terreſtrial parts: So that there is no way to ſeparate it truly, but by Rectification, which ſeparates and raiſes it above all the other Principles. This Sulphur, being like

Oyl,

Oyl, is a ſubſtance between Spirit and Salt, ſo that it may be united to them by Circulation, for the making of Elixirs, Univerſal Medicines, and all the rare preparations of Chymical Pharmacy. This ſulphurous Principle being ſeparated from all the reſt, not only reſiſts cold, but of it ſelf never congeals. It is incorruptible, and ſo preſerves thoſe Body's that are embalm'd within it, ſo that they do not too exceſſively abound in Flegm. It mortifies the acrimony of the Salts; it unites and coagulates with them: It reſiſts Spirits, and Aquafortis it ſelf, that it can can do no good upon it. It cheriſhes the natural heat. It is a great Friend to the Nerves, and facilitates the motion of the Muſcles: It is the Balſom of all things. It is a mollifier, lenitive, diſcuſſive, and an aſſwager of pain. It increaſes the Spirits, in Vegetals and Animals. It is as it were the Soul of Minerals: It is the matter and foundation of all Odours and ſcents; and keeps in the middle between the drineſs of Salt, and the moiſtneſs of the fluid Spirit.

CHAP. VII.

Of Salt.

Salt is the Spirit, which after diſtillation uſually remains mixt with the Earth; which being ſeparated, puriſi'd, and dry'd, looks of a white colour, of a dry and brittle conſiſtence. Salt is eaſily diſſolv'd in moiſture, and being diſſolv'd, it indures the Oyl: It may be alſo join'd to the Oyl by vertue of the Spirit. Though this Salt ſeem to us to be very dry, nevertheleſs there is an internal moiſture in it, which renders it apt to run with a great fire. Salt reſiſts Fire, and is puriſi'd thereby. It is incombuſtible, and may be preſerv'd as long as you pleaſe without any loſs, or ſuffering any alteration of its own nature: The taſte thereof is tart and ſharp, with a little bitterneſs: From whence it has been tak'n for the foundation of all ſavors; though the other Principles are not without them, by reaſon of ſome Particles of Salt that may remain in their ſubſtances. It is hot and penetrating; it haſt'ns the running of Mettals; it helps to preſerve all ſubſtances. It attracts to it ſelf all that are volatile, and fixes them. It ſtrongly unites with the Spirit, inſomuch that if the Spirit exceed it three or four times in quantity, it aſcends with it in diſtillation. It coagulates certain Liquors. It purges, cleanſes, opens, reſolves, dries up, and conſumes ſuperfluous humours. It hinders the conſumption of the Oyl. It is the Life and Soul of all ſubſtances. Without it the Earth is barren; through the exceſs of it, it becomes unfruitful. It preſerves Animals in health and makes them fruitful. It conſolidates all ſubſtances, eſpecially Minerals; and makes the Spirit corporeal by joining with it. By the way obſerve, that the Salt of Animals, as alſo of certain Vegetals, is not found among the Earth at the bottom after diſtillation: in regard that by reaſon of its volatile nature it riſes like a kind of Spirit, among the Oyl, and with ſome part of the Flegm; whence it may afterwards be ſeparated by Rectification. This volatile Salt has ſome of the qualities of that which I have already mention'd; but its volatileneſs carries it thither, where the other cannot reach of it ſelf without the help of this. It penetrates in an extraordinary manner, ſo that neither the Eyes, nor the Noſe can endure the ſtrength of it, in any great quantity; by reaſon of its volatileneſs it cannot reſiſt Fire, which it cannot endure, unleſs mingl'd with ſome acid Spirit, or with ſome fix'd Salt that ſurmounts it in quantity. The volatile Salt is too ſmart upon the Noſe, the Tongue, the Eyes and the Brain by its penetration; but it neither has the acrimony, nor the bitterneſs of the fixed Salt; nor does it leave any conſiderable heat behind it, either upon the Tongue, or any other place.

CHAP. VIII.

Of Earth.

Earth is the laſt Principle, and the leſs eſteem'd of all. It appears laſt at the end of Diſtillation and Calcination; and when the Salt which was mix'd with it is drawn

out

out of it by Diſſolution and Filtration. This Earth thus ſeparated from all the Principles is called *Caput mortuum*, or the *Dead Head*, by the Chymiſts, having no other conſiderable Quality but aſtriction and drineſs. This Principle however is very neceſſary in the compoſition of mixt Bodies: for while the Sulphur makes it tenacious, viſcous and clammy; while the Salt makes it hard and firm; while the Spirit affords it nouriſhment and motion; while the Flegm is the cauſe of growth, and tempers all the other ſubſtances; from the Earth it receives a conſiſtence neceſſary for its preſervation: ſo that there is no ſubſtance in a mixt Body which has not its proper office, and particular ſervice. The Earth after the diſſolution of the mixt Body is that which troubles all the active Principles, and muſt be ſeparated from them; for when it is mix'd with them, it hinders their action; It ſtops the Pores, it engenders Obſtructions, it incorporates with the ſalts and ſpirits, and begets ſtones in the bladder and reins, and very much contributes to the Original of ſeveral Diſeaſes. The Earth ſeparated from the other ſubſtances is often porous and very light; it eaſily unites it ſelf with the ſubſtances from whence it was ſeparated. It borrows the weight of the other Principles, eſpecially of Salt and Spirits which are the heavieſt. The uſe of it in Phyſick is only exterior, where there is any occaſion to cloſe up and fortifie the parts.

CHAP. IX.

Of Medicament in general.

Medicament is defin'd to be any thing that is capable to change our Nature for the better. Medicament is divided into Internal and External; and both thoſe into Simple and Compound. The Simple Medicament is that which is produc'd by Nature, though it be in truth compos'd of all the five Principles already mention'd. The Compound is that which depends upon ſeveral Simples different in vertue, and mingl'd artificially together. Sometimes a Compound Medicament may bear the Name of Simple to diſtinguiſh it from another more compounded, which carries the ſame Name. *Aliment* differs from *Medicament* in this, that being taken inwardly it nouriſhes and increaſes our nature: whereas Medicament can only alter it, whether outwardly apply'd, or taken inwardly.

Poyſon differs from Medicament in this, that it deſtroys our Nature: but it may paſs for Medicament, in regard that Pharmacy is able to correct and tame whatever it has of wild and miſchievous, and render it wholſome, as well when giv'n inwardly, as when outwardly apply'd.

Medicaments differ among themſelves, either in their matter, or in their vertues.

The matter of Medicaments is taken from Vegetals, Animals, and Minerals.

By Vegetals I underſtand Trees, Shrubs, Brambles, Herbs with all their parts; all things that belong to, or grow upon them; and in general every thing that has a vegetative Life, and which receiving nouriſhment from the Earth by ſome ſort of Root or other, grows either above, or near the ſuperficies of the Earth; like the real Plants whoſe name is common with that of Vegetals. So then we are to comprehend under the Name of Vegetals, Roots, Stalks, Bark, Wood, Boughs, Leaves, Flowers, Berries, Cods, Seeds, Gums, Roſins, Juices, Tears, Liquors, diſtilling Waters, Kernels, Muſhromes, as well thoſe that grow out of the Earth, as upon Trees and other places; Water-Nuts, the excreſcences of Trees, as Muſſeltoe, Moſs, Cottons, Galls, Thorns, Sugar, Manna, and ſeveral other Plants which it would be too tedious to repeat.

By Animals I underſtand Fowl, Land-Creatures, Water-Animals, and ſuch as are accuſtom'd to Land and Water: and not only ſuch as are made uſe of whole, as Scorpions, Frogs, Worms, Cheſtops, little Dogs, Emmets, Cantharides, Lizzards, *&c.* but all the parts of the bodies of Animals, which may be us'd in Phyſick, not excepting their excrements and ſuperfluities, as are the brain, the fat, the blood, the hair, the dung, the urine of Men; the horn, the pizzle, the ſtones, the ſuet, the marrow, the bone of the heart of a Deer; the liver and inwards of a Wolf; the greaſe, milt, the yellow ſtones, and bone in the heart of an Oxe, the foot of an Elk, the lungs of a Fox, the brains of a Sparrow, the tooth of an Elephant and a wild Boar, the horn of a Unicorn and Rhinoceros. The ring-bone, hoof, fat and dung of a Horſe; the dung of a Mule, or Aſs.

Musk,

Musk, Perles, Bezoar, Shells. The jaw of a Pike, the claws, ſtones, and juice of Craw-fiſh; the blood, and fat of a Wild Goat, and Kid. The heart, liver, trunk, head, tayl, fat and skin of Vipers; the fat, and ſperm of a Whale. The liver, and fat of Eels; the bone of a Toad, the greaſe of Bears: the greaſe, and ſtomach of a Capon; the feathers of a Wood-cock, and Partridges; the ſtinking oyl of Bezoar-ſtone. The greaſe of Hogs, Badgers, Geeſe, Ducks, and ſeveral other Animals. The dung of Cows, Dogs, Mice, Lyzards, their bones, their skins, their excreſcences, their hair, their urine, their ſweat; and in general whatever appertains to the bodies of Animals.

By Minerals I underſtand all Metals, Half-metals, and what belongs to Metals. All ſorts of Earths, and Bole-Armoniack; all Stones, Marbles, Flints, Porphyries, Jaſpers, Chryſtals, Jacinths, Emraulds, Saphirs, Granats, Blood-ſtones, Diamonds, and all ſorts of Jewels: Sulphurs, Vitriols, Allums, *Sal Gem*, Bay-ſalt, Water, Rain, Snow, Ice, Hail, Thunder-bolts, Dew, Manna of ſeveral ſorts, Morter, Lime, Brick, Oyl of Naphta, Amber-griece white and yellow; Jet, Sea-coal and all Bitumens. Talk, Chalk, Biſmuth, Zink, and all Marcaſites, the ordinary Earth, Sand, Clay; and in general whatever is drawn out of the Bowels of the Earth, or Sea; or deſcends from the Air, being without Life. Some there are that add to theſe, Corals and Spunges, which others will have to be Plants.

Here I might take a fair occaſion to make a large Catalogue of all the principal ſimple Medicaments, wherewith Vegetals, Animals, and Minerals, furniſh *Pharmacy*; but the unprofitable confuſion and perplexity, which I have obſerv'd in ſome *Pharmacopœa's*, have diverted me from it, and have made me reſolve not to ſpeak of them any otherwiſe in the progreſs of this Treatiſe, than as neceſſity ſhall lead me to make more particular Illuſtrations upon ſome that need a peculiar explanation.

CHAP. X.

Of the Vertue of Medicaments.

THE Vertue of Medicaments may be defin'd to be a proper and inſeparable accident, upon which their action depends. So that we may ſay, that the Faculties, or Vertues of Medicaments cannot be well known, but by their action or operation. We obſerve three Vertues in Medicaments, the altering Faculty, the purging Faculty, and the ſtrengthening Faculty. The altering Faculty is known by the manifeſt alteration which it makes in our Bodies. The purging Faculty carries away the ill humors, either by expelling them, by making the paſſages ſlippery to make them way, or by attracting them together, and forcing them out at the uſual vents of Nature. We may comprehend under *Purgative*, the *Diaphoretic* Faculty, which ſends forth evil humours through the Pores of the Skin; and the *Diuretic*, which expells them by Urine. The ſtrengthening Faculty, or Vertue, fortifies and preſerves the Body, or ſome one of its parts, by a ſpecific operation.

There are three ſorts of Vertues attributed to Medicament. The firſt ſort, which by the Ancients was eſteem'd Elementary, and only ought to be attributed to the Principles whereof it is compos'd; that is, that it heats, cools, moiſtens, and dries; and, ſtill to follow their opinion, ſometimes obſcurely in the firſt degree, ſometimes manifeſtly in the ſecond, ſometimes violently in the third, and ſometimes to extremity in the fourth. They alſo give to each degree, a beginning, a middle, and an end, which denotes the diminution or exceſs of heat, cold, moiſtneſs, or drineſs.

The ſecond Qualities are the Products of the firſt: For the property of heat is to open, rarefie, attenuate, attract, *&c.* The property of cold is to thicken, to condenſe, to ſtop, to repell, *&c.* The property of moiſt is to moiſten, mollifie, *&c.* The property of drineſs is to knit, hard'n, and diſſipate humidities, *&c.*

The third Qualities are hidd'n, and we can only find them out by experience. As when a Jaſper apply'd to a Wound ſtops the blood: when a Toad dry'd, being held in the hand, ſtays bleeding at the Noſe, and aſſwages the Tooth-ach, which is alſo perform'd by the Bone in the Fore-leg of the ſame Toad; when a Stick of Aſh, boyl'd under a certain Conſtellation, ſtops all loſſes of blood; when a Hazle-Stick, gather'd in its

proper

proper ſeaſon, heals all contuſions; when the Eagle-ſtone hung about the neck, hinders abortion; and haſtens and facilitates the Birth, being ty'd to the thigh: as when a ſtraw cleaves of it ſelf to Amber, or Spaniſh-wax, Iron to the Load-ſtone; as when certain Plants ty'd to a Horſes tayl, heal the Farce: and ſeveral other effects of the ſame nature, of which Philoſophers labour to give the natural reaſon.

CHAP. XI.

Of Election, or Choice.

EVery Artiſt ought to underſtand the matter of which he intends to make uſe, before he undertakes the cure. And therefore with great reaſon Pharmacy is oblig'd to begin its operations with Election.

Election is the diſcerning and choice of a good Medicament from a bad one. We may alſo alleadge it to be the diſcerning and diſtinguiſhing of every particular Medicament, when there are ſeveral of a various nature mingl'd together.

The Ancients by the word Election, did not mean a knowledge as inward and ſecret as we could obtain by the help of Chymical Pharmacy, which by the means of proper diſſolvents, reſolves the bodies into the principles whereof they are compos'd, whereby we gain an inward knowledge of all their parts; but they only intended a ſuperficial knowledge of the true Character of every drug. Now both the one and the other of theſe two skills cannot be principally acquir'd but by the help of the Senſes, which are Seeing, Smelling, Taſting, Hearing and Feeling; which are not alwayes neceſſary altogether, to diſcern every Mixture ſeparately, in regard there are ſome that may be diſtinguiſh'd only by the Sight, others by the Smell, others by the Taſte, others that require a concurrence of more Senſes than one towards a more perfect Election. And though that without the Tryal of fire, all the Senſes together cannot furniſh us with an exact knowledge of all the parts whreof mixt bodies are compos'd, yet they afford us enough to diſcern one mixt body from another, and the good from the bad; and as much judgement as is requir'd to ſelect them for ſuch and ſuch occaſions, or elſe to make a ſeparation of them by Chymiſtry.

Election is made from the Eſſence, the Subſtance, or the Qualities of the mixt body. The Subſtance mainly conduces to the knowledge of the Eſſence. The Qualities aſſiſt to the knowledge of both together, adding thereto the tryal of the exterior diſpoſition of the mixt body. By Subſtance we underſtand a certain couching or joyning together, or a conſiſtency of matter, which is found out by the mixture and the proportion of the five principles. Whence it comes to paſs, that ſome mixt bodies are very heavy; others light, ſome cloſe, others ſpungy; ſome coarſe, others fine; ſome brittle, others clammy, &c.

The Sight ſerves to diſcern colours, and the various external diſpoſitions of mixt bodies: it diſcovers alſo the internal diſpoſition when the body is open'd by breaking, cutting, or otherwiſe.

The Smelling receives through the Noſtrils a certain evaporated ſubſtance that riſes from the mix'd body, and is carry'd to the Brain. The difference of Odours is ſo great, that it is impoſſible to relate the variety; but only by compariſon we may gueſs by the affinity or remoteneſs of ſcent, what congruity one mixt bodie may have with another. Nor indeed are there above two differences, the one good, the other bad; though each of theſe may differ from their like, in the degrees of more or leſs.

Feeling ſerves to diſtinguiſh the ſmoothneſs or roughneſs of the mixt bodie: but the chief uſe thereof is to diſtinguiſh between heavy and light, hard and ſoft. Feeling is alſo to be made uſe of, when becauſe there can be no poſitive judgement made of the exterior part, there is a neceſſity of breaking or cutting into the in-ſide. It ſerves alſo to underſtand the viſcouſneſs or brittleneſs of a mixt body.

The Taſte is a Senſe which is as much or more neceſſary than any of the reſt, by reaſon of the diverſity of Savours in mixt bodies; which proceeds from the various nature of the Salts, that are mix'd in the Compoſition of their Subſtances: and for that Savours are eaſie to be diſtinguiſh'd and deſcrib'd.

Authors unanimouſly acknowledge nine ſimple Savours; of which they will have three to be hot, three to be cold, and three temperate. The tart, the bitter, and the

the ſalt they place in the rank of hot Savours: The ſtiptic or ſowre, the ſharp, the eager, in the rank of cold Savours: The oylie, the ſweet and the inſipid, they alledge to be temperate.

The Hearing is of leaſt uſe in the election of mixt Bodies. For it only ſerves to judge of their parts when they are clos'd up in their Covers, as the Eagle-ſtone; or in their rinds, as *Caſſia*, whether it be moiſt or dry'd up; or in their cods or husks, as ſeveral Seeds: unleſs we may bring it to the ſound of Metals, the knowledge whereof is more uſeful in the courſe of common dealing, than in *Pharmacy*.

The practice of theſe Senſes has been the riſe of ſeveral general Rules, not only for the knowledge of mixt Bodies; but alſo for the preſcription of them, which ought not to be unknown.

For it is neceſſary to examine the lightneſs of Medicaments that purge by attraction, as Agaric, Colloquintida, Scammonie, and Mechoacan; yet this Rule admits of ſome exception. For Jalap, Hermodactiles, and Turbith, are accounted more roſiny and beſt, when being dry they feel a little weighty.

'Tis neceſſary to examine the weight of Medicaments that purge by compreſſion, mollifying and lenifying, as Rhubarb, Caſſia, Mirobalans and Tamarinds.

The ſoft and ſmooth ſuperficies of a Medicament, is to be preferr'd before the hard and rough. Remedies moderately hot, are to be preferr'd before cold; moiſt before dry. Hot and moiſt excel cold and dry. 'Tis alſo neceſſary to chooſe good Scents, and to avoid bad ones: and to act quite contrary in ſome Hyſteric diſtempers of Women, who cannot endure the ſcent of ſweet odours, which are only then to be employ'd in the lower parts.

Savours perfectly ſowre are naught: thoſe whoſe ſowreneſs is accompany'd with a kind of ſtipticknes or reſtringency, are leſs hurtful; bitter and ſtiptick are the leaſt hurtful of the three. Sweet is the beſt of all Savours, inſipid next; acid-ſweet holds the third place, bitter-ſweet the fourth, ſweet and ſtiptick the fifth.

CHAP. XII.

Of the Place, Number, Bigneſs, Neighbourhood and Time which concur to the choice of a Medicament.

AS to the Place; we muſt obſerve that Plants, which grow of themſelves in a place that is free and proportionable to their nature, are to be preferr'd before thoſe which are tranſplanted, and nouriſh'd by Art. That Plants which grow in the Mountains, eſpecially thoſe that lye to the Eaſt and South Sun, are to be preferr'd before thoſe of the ſame ſort that grow in Valleys. That a Plant hot and tart that grows in a moiſt place, has leſs heat and leſs tartneſs then that which grows in a dry place. That that plant, which abounds in ſuperfluous moiſture, will be far better in a dry than in a moiſt place.

The moſt part of thoſe Rules which are obſerv'd in reference to the Native place of Plants, are to be follow'd in the choice of Animals us'd in *Phyſick*, and which ſerve us for food.

As for Minerals, there is nothing more to be obſerv'd, but onely to procure them from ſuch places where they are the faireſt and moſt pure.

As to the Number and Bigneſs, it is to be obſerv'd, That Plants accounted good, but more eſpecially Fruits, are the better, the leſs their number is; but hurtful Plants and miſchievous Fruits, have leſs malignancy, where they are moſt abundant. That a Fruit good of it ſelf, is eſteem'd the better the bigger it is. The contrary is to be obſerv'd in Fruits, and other parts of Plants, as alſo in Animals that are hurtful. I ſay nothing to Minerals at this time.

As to Neighbourhood, Miſſeltoe and Polypodie are to be commended that grow upon Oaks. *Dodder* of time, and *Dodder* it ſelf that grows upon hepatic Herbs. *Champignons* growing under rotten Trees, are to be rejected; as alſo Plants that grow near Houſes of office, and in ſhady places, where the Sun cannot come; unleſs they be ſuch Plants as naturally grow in ſhady places, as Maidenhair, Liverwort, and Harts-Tongue.

The Time proper for the gathering of Plants, depends upon the diverſity both of them, and of their parts, as alſo upon the uſe which they are to be put to. Fair weather muſt be always waited for. Fruits muſt be gather'd when they are fully ripe; as alſo Berries and Seeds. Herbs with their tops when they are in their full vigour, and as near as may be in the full of the Moon. Flowers, when they are in their full bud, and before they are quite blown, and before the Sun has wither'd 'em. Roots muſt be gather'd in the beginning of the Spring, and when the Herb begins to ſprout forth. Woods muſt be cut after the full of the Moon. Tears, Gums, Roſins, and diſtilling Juices, before they are melted by the rays of the Sun, or waſh'd off by the Rain. Rinds and Barks, when the Plants are full of ſap.

As for their preſervation, the parts of Plants and Animals muſt be dry'd with all convenient ſpeed, by laying them in the Sun, which are of a compact and humid ſubſtance; by expoſing them to the Air and ſhade, which are of a thin and ſlender ſubſtance; by keeping both the one and the other, when they are well-dry'd, cloſe ſhut up in Boxes, and thoſe Boxes in dry places, expos'd neither to the Sun, Wind nor Rain.

Rain, which we have plac'd among the Minerals, ought to be preſerv'd about the Vernal Equinox; Snow and Ice in their ſeaſon; the Spawn of Frogs in *March*. Dew and *Manna* in *May*, gather'd from wholſom Herbs. Ambergreeſe, Amber, Jet, Oyl of Naphta, and all ſorts of Bitumens, before they are chang'd by the Sea or River-water, by the Sun or the injury of Time.

Animals, the ſoundeſt and moſt vigorous, are to be made choice of; whether they are to be made uſe of whole, or in any of their parts. I will not here ſpeak of their Conſervation, which depends upon their Preparation, of which more in due place.

CHAP. XIII.

Of Preparation.

ANimals, which God has ſubjected to the power of Man, have thoſe advantages wherewith Men are altogether unprovided. For beſides that as ſoon as they are born, they are in a condition without help to provide for themſelves all things neceſſary for their ſubſiſtance; as alſo for their own cures, when they are ſick; that nouriſhment which is proper for them is always ready, needing nothing of Art to cook it. Neither boyling nor waſhing are in uſe among them, not being accuſtom'd to eat more, then for thoſe Remedies for which Nature has deſign'd and prepar'd them her ſelf. But Men have need of a thouſand Preparations for their neceſſities. For notwithſtanding thoſe advantages which they enjoy in being advanc'd to a degree little below that of Angels, to have Reaſon and Underſtanding, and to know that all things were created for their uſe; yet are they not able to cure their Diſtempers, not ſo much as to nouriſh themſelves, without the Preparation of Food and *Phyſick*. For how much labour and preparation is requir'd before Corn comes to maturity? How much more before it can be made into Bread? What toyles are requiſite to the making of Wine, Vinegar, Beer and Cider? What pains to provide the very Food appointed for our nouriſhment? We muſt not wonder then if Medicaments ſo neceſſary for them, have need oft Preparation, or that there is a neceſſity for Men to have recourſe to Perſons that underſtand how to know, prepare, and adminiſter them according as occaſion requires.

As to the extent of the matter of Medicament, it is eaſie to judge that the number of Preparations cannot but be very great. And ſo much the more, in regard the *Chymical Pharmacy* has very much augmented thoſe, which the *Galeniſts* have for ſo long time together practis'd. Now in regard it is the deſign of this Work to comprehend both the one and the other *Pharmacy*, and that they have both need of the mutual aſſiſtance of each other, I thought it very much to the purpoſe to rank them both together, ſeeing they both aim at the ſame end, which is the Health of Mankind.

Preparation, is an Artificial labour whereby a Medicament is brought to that condition which the uſe of it requires.

Medicaments are prepar'd for ſeveral purpoſes; ſometimes to augment their Vertue, ſometimes to diminiſh it; ſometimes to ſeparate ſome evil quality, or correct its

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malignity; ſometimes to unite them with ſome other; ſometimes to alter their Nature, or communicate their Vertue; and ſometimes to accommodate them to the habit and conſtitution of the Patient. Whence it comes to paſs that the ſame Remedy preſcrib'd to ſeveral Perſons will require ſeveral Preparations, eſpecially when it comes to be us'd.

The Preparation of a Medicament is accompliſh'd after three general manners: by adding, abating, and changing the condition of the Medicin. Oyl is added to Wax to make it ſofter; a Medicament is infus'd in ſome Liquor, to the end it may communicate its Vertue. Sugar or Honey are added to Powders, for the making of Compoſitions. Sulphur is added to Nitre, Nitre to Antimony; *Aqua-fortis* to Mercury, *&c.* We take away the Kernels from Mirobalans, the Earthy Subſtance from Scammony, the moiſture from Salts, the Pith from Roots, the white of red Roſes, the yellow part of Saffron, *&c.* The alteration of Medicaments is perform'd ſeveral ways, as we ſhall ſhew by the examples of the following Compoſitions.

CHAP. XIV.

Of Lotion, *or Waſhing.*

M*Eſues*, and the moſt part of the Ancients, have compriz'd all Preparations under four that are principal; *Lotion* or Waſhing; *Trituration*, crumbling, or beating in a Mortar; *Infuſion*, and *Coction* or Boyling; of which they have ſet forth ſeveral ſorts. The two firſt are of the ſmalleſt extent; but the two latter, which are of a larger extent, will furniſh us with a great number of ſorts: eſpecially in the *Chymical Pharmacy*, the explanation whereof deſerves to be better known.

Lotion is perform'd by plunging or waſhing a Medicament in water, or in any other Liquor. It is either ſlight and ſuperficial, to waſh away the dirt, as when we waſh Roots and Herbs; or internal and penetrating, either to carry along with it the more ſubtle parts of the Medicament, as when we waſh Litharge, Antimony Diaphoretic, *&c.* or to carry off ſome Salt or corroſive Spirit, as by the fore-mention'd waſhing of Antimony, as alſo of *Precipitates* and *Magiſteries:* Or to take away ſome ill quality, as in the waſhing of Oyls, Suets and Turpentine, *&c.* or to imbibe into the Medicament ſome part of the Liquor wherein it is waſht, as in *Galen*'s Sear-cloth; or to communicate ſome good quality to it, as by the waſhing of *Tutia* in Roſe-water, Wax to whiten or blanch it, Pomatums in Aromatick-waters to give them a good ſcent; or to ſeparate ſome internal part, as when we waſh *Lapis Lazuli*, having firſt made it red-hot in the Fire.

In Waſhing there is an operation made uſe of, which is call'd *Sloping by inclination*, when we pour the Water gently out that ſwims above the Subſtance. This is practis'd not onely in Lotions, but in Tinctures, and upon ſeveral other occaſions.

Waſhing of Aloes is an improper term; it being only a Diſſolution of the more pure parts of the Aloes, to ſeparate them from the impure. There are ſeveral circumſtances to be obſerv'd in the Lotion of Medicaments, according to the diverſity of their Subſtances, which will be more ſeaſonably treated of in the practice of Lotions, which I will ſhew in the following part of this Work.

CHAP. XV.

Of the Purgation of Medicaments.

TO purge or cleanſe, among the *Apothecaries*, are terms ſynonymous, having both the ſame force of ſignification. And I therefore treat of the Purgation of Medicaments next to Lotion, becauſe Purgation takes quite away thoſe ſuperfluities that Lotion cannot carry off. We take from *Coloquintida* its grains; from Dates, Prunes, Apricocks, Tamarins, and many other ſorts of Fruits their ſtones; from Grapes the ſame; from the cold Seeds, and thoſe of *Carthamum* or baſtard Saffron, Citrons and many

others, their husks; from the Roots of Eringo's, Fennel, Cichorie, Aſparagus, and the like, we take out the pith, and other ſuperfluities. From green Wall-nuts the rind, and from dry ones the ſhells, as alſo from Almonds and ſmall Nuts; we take off the ſuperfluities from the Roots of Mountain *Spikenard*, and Couch-Graſs. We make no uſe but of the hairy threads of *Spikenard*; we uſe the flowry tops of ſome Herbs, and fling away the reſt; we take away the membranes and fibers out of *Caſtoreum*, as alſo the unctuous part when it is to be ſwallow'd. We only make uſe of the oylie part when we uſe *Caſtoreum* for Oyls and Oyntments. We only take the Body, the Heart, the Liver of a Viper dry'd, to powder; and only the Fat, to make *Emplaſtrum de ranis*. Nevertheleſs ſometimes we uſe the Viper whole, when we ſtuff them and preſerve them in Spirit of Wine. We throw away the wings and feet of *Cantharides*. We only uſe the reins of the Sea-Stinc's, and throw away all the reſt. We take the tart juices of Granates, Barberies and Citrons, to make Syrups; or to diſſolve certain Minerals. We dry the rinds of Granates. We condite, dry, diſtil, and make Syrup of Citron-peel: the Seeds whereof ſerve alſo for many uſes; as alſo that of Barberies, while we throw away the reſt as uſeleſs: we caſt away the wooden part or rind and the grains of *Caſſia*; and ſeparate the inward obſcure part of *Rhubarb*; and the cups and rinds of Acorns, reſerving them for other uſes. We diſpoil the grains of branch'd *Amomum* and *Cardomums* of their husks. We take away the bark and woodden part of *Agaric*, and the terreſtrial parts of *Scammony*, *Aloes*, and ſeveral other thick Juices: as alſo the filth that is mix'd with ſeveral other Gums, which are comprehended under the name of Juices. We ſeparate Gold from Silver by the *Inquart*; we purge and purifie both in a Coppel or Aſhen-pot, and by ſeveral other ways. We take away the thick of Mercury, and ſeparate the impurities of Metals, Half-metals and Metallics; as alſo of Salts and Sulphurs. In ſhort, there are few things that ſerve either for Medicament or Nouriſhment, which have not ſome parts which are to be ſpar'd.

CHAP. XIV.

Of Trituration, *or Beating in a Morter.*

Trituration denotes the diviſion of a Medicament into very ſmall parts. The firſt, which better agrees with its Name, is meant of Medicaments hard and dry; the ſecond of Medicaments moiſt and ſoft. The one and the other are ſerviceable in ſeveral Preparations of both *Pharmacies*. They are ſerviceable alſo for divers purpoſes; the chief of which are, to reduce a Medicament into a condition to be united and mix'd with others; or to make it more convenient and proper to be taken inwardly, or outwardly apply'd. *Trituration* of dry things is variouſly perform'd, according to the various nature of the Medicaments. For Woods muſt be ſaw'd, cut, bruis'd, and ſometimes raſp'd, and then be put into a braſs Morter for *Trituration*. Horns, Hoofs, and Bones muſt be ſaw'd before they can be broken into ſmall pieces; or elſe raſp'd, either to be ſo made uſe of, or elſe to be beaten to powder. Metals and Metallics muſt be fil'd for the moſt part, before they can be reduc'd into powder. But the *Chymiſts* uſe means much more proper to op'n and divide them into parts, without any compariſon far more fine and ſubtle, then they can poſſibly be, which are divided by any way or means of *Galenic Pharmacy*. The Roots of Trees being of the ſame nature, muſt be reduc'd to powder by the ſame method.

The dry parts of Plants call'd Herbs, as roots, ſtalks, leaves, flowers, dry Fruits, Berries, Seeds, Excreſcencies both of Herbs and Trees with their barks, may be bruis'd in a Morter, without any preceding Preparation, but onely of being cut and broken. The ſame thing may be done to the tender parts of Animals, being firſt dry'd; as the Fleſh, the Blood, and the tender bones of little Animals, and ſome of the greater, as the bones of the hearts of Deer and Oxen. Nevertheleſs upon ſome occaſions, and for ſome Subſtances, there muſt be recourſe to Addition. As for Example; If you were to pound the Roots of *Birth-wort*, *Gentian*, or any ſuch-like herbs that are of a clammy Subſtance, though they ſeem to be well dry'd, they will ſtick to the Morter and the Peſtle, unleſs you mix them with Almonds, or ſome of the cold Seeds cleans'd, or ſome other oylie matter, proper to divide their parts, while you pound them, without which you ſhall never make them fit for your uſe. Shavings of Ivory and Hart's horn may be triturated,

turated or beaten in a Morter among Sugar-candy alone. *Camphire* cannot be pulveris'd alone, unleſs you add ſome few drops of the Spirit of Wine, when you beat it, or ſome of the cold Seeds cleans'd, or a drop of ſome oyl. The ſame cold Seeds are ſerviceable to divide the parts of clammy Subſtances; among the reſt alſo, thoſe of the dry, but not greaſie parts of Animals. They help alſo to reduce into powder Ambergreeſe, all Bitumens, and all roſiny Juices dry'd, as Scammony, Benjamin, Balſom, and the like. The heat of the Braſs-morter and the Peſtle help to pulveriſe Gum-*Tragacanth* and Gum-*Arabick*, as alſo *Venetian*-Talk, which will however beat much better if it be expos'd a while before a flaming fire.

Many Minerals and many parts of animals cannot be reduc'd into fine powder, till they have been firſt burnt or calcin'd in the fire. Precious Stones, Bole-Armoniac, Earths, Amber, the Adamant, and ſome parts of Animals may be reduc'd into a powder ſcarce to be felt, which is call'd *Alkohol*, being bray'd upon *Porphyrie*, adding thereto ſo much Cordial-water as will bind the powder together, and keep it from waſting in beating. When they are beaten very fine, ſpread them upon clean Paper, and dry them in the Sun: And this is that which the *Galenic Pharmacy* calls Preparing. Medicaments of a ſolid ſubſtance, as wood, and ſeveral compacted and fibrous parts of Plants and Animals, muſt be ſoundly pounded in a great Iron or Braſs-morter: But thoſe Medicaments whoſe parts are thin and without fibers, require only a gentle bruiſing to reduce them to powder; as Aloes, Agaric, Myrrh, Amydon or dry'd flower of Wheat, Maſtick, Scammony, and many others. In ſhort, when ſeveral Medicaments are to be reduc'd to powder, which are appointed for one compoſition, the nature of their ſubſtance is to be regarded, and thoſe things are to be bruis'd or beaten by themſelves which either ought or may be ſo conveniently; and beat together thoſe that will endure it. Thus you muſt firſt begin to powder thoſe whoſe ſubſtance is moſt compact and ſolid, and then add the reſt in order according to their hardneſs. Which I ſhall particularly demonſtrate how to do, when I come to ſpeak of the particular Preparations of powders, which are to be mix'd in Compoſitions.

The ſecond ſort of *Trituration*, which is only of humid matters, is ordinarily perform'd in a Marble or Porphyry-morter, or elſe of ſome other hard Stone, with a wood'n, glaſs, or Ivory-Peſtle; though for ſome things they may be beaten in an Iron or Braſs-morter. This ſort of *Trituration* is ſometimes us'd for dry Subſtances that will endure beating, but chiefly for moiſt and oylie Medicaments and Nouriſhments; ſuch are Roots, Herbs, Flowers, green Fruit or newly gather'd, watry Berries, oylie Seeds and Fruits; and all the ſoft parts of Animals; of all which things are prepar'd ſometimes Conſerves, ſometimes Cataplaſms, Poultiſſes and Pomatums: Sometimes they are bruis'd for Decoction, Infuſion or diſtillation; to extract the Juice, to preſs out the Oyl, to extract Emulſions, to make Paſtes, to be taken inwardly, or apply'd outwardly; to make Lozenges, Trochiſſes, or other Medicines.

CHAP. XVII.

Of Cribration, *or Sifting.*

Cribration, is a ſeparation of the more fine and ſubtle parts of Medicaments as well dry as moiſt, or oylie, from the groſſer. It is perform'd through Inſtruments proper for that purpoſe call'd Bolters or Sieves, which are compos'd of two wood'n circles, as it were, enchas'd the one within another, in the middle of which is nail'd and ſtrain'd a hair-cloth, or a piece of ſilk if it be a Sieve, or a piece of Parchment with holes at an equal diſtance, if it be a Bolter. Sieves of ſingle hair-cloth, ſuch as we have deſcrib'd, are ſerviceable not only to ſift groſs powders, but alſo the pulps of viſcous and oylie Medicaments, after they have been beaten and re-beaten in the Morter. Theſe Sieves ſerve alſo to ſift Ceruſs, rubbing it firſt upon the extended cloth, which muſt be of hair, and receiving the powder upon a ſheet of white Paper. Bolters ſerve only to ſift the groſſer ſort of Airy-ſubſtances.

There are alſo certain ſort of Sieves, which are call'd Covers, for the ſifting of Powders Aromatick, Cephalick, Cordial, Digeſtive, Laxative, and other more precious ſorts of Powder, or any that ought ſo to be finely pulveriz'd. Theſe Cover'd-ſieves are compos'd of three diſtinct parts, imbox'd or inſerted together, every one of which is

compos'd

compos'd of three wood'n-circles, the middle-moſt receiving the upper-moſt and lower-moſt like a Box-lid. The middle-moſt is that wherein the linnen-cloth or ſilk is fix'd, through which the Powders are to paſs. That part is fix'd in the lower part, which is made to receive the Powder in a skin, which ſerves for the bottom of it. It is alſo cover'd with the upper part, which embraces it like the Lid of a Box; and being cover'd as the under-moſt with another skin, hinders the Powders from waſting, while they are ſifted.

CHAP. XVIII.

Of Infuſion.

THE word *Infuſion* comprehends a great many *Galenical* and *Chymical* Preparations, which ſhall be explain'd hereafter. *Infuſion*, generally taken, is a Preparation by which entire Medicaments or their parts, being cut or bruis'd, are ſteep'd and infus'd in ſome agreeable Liquor. Sometimes it is done with fire, ſometimes without it, according to the thinneſs or ſolidity of the Subſtances which you infuſe. Which alſo ſerves for a Rule, as to the length or ſhortneſs of time neceſſary for Infuſion. The variety of Medicaments and the various intentions of the *Phyſicians*, oblige the *Apothecaries* to uſe various Liquors for Infuſion; as Common-water, Rain-water, Snow-water; Sea, Mineral, Roſe-water; Wine, Verjuice, Hydromel, Muſt, Vinegar, Beer, Milk, Whey, ſeveral Juices of Plants, Oyls, Broth, Diſtill'd-waters, Spirit of Wine, *&c.* Infuſion is made to impart the vertue of one or more Medicaments to the Liquors wherein they are infus'd. Sometimes it is alſo made to correct the evil quality of the Medicament, or elſe to augment its vertue, as alſo to unite in the ſame Liquors the different vertues of ſeveral Medicaments, infus'd together for ſome particular purpoſe. Infuſion is alſo made to ſeparate ſome particular Vertue of one Medicament, from the reſt which it may alſo have. As when by a quick Infuſion we ſeparate the purgative quality of *Rhubarb* and *Mirobalans*, to the end they may be purely aſtringent. Infuſion of *Senna* in Fountain-water, may ſerve as an Example of ſimple Infuſion, which may be done either with fire or without fire, and to manifeſt the communication of its vertue to the Water. The Infuſion of Spurge in Vinegar to take away its purgative quality, may ſerve as an Example of correction. The Infuſion of *Rhubarb* or *Senna* in the Juice of pale Roſes, may ſerve as an Example of the augmentation of their vertues. The Infuſion of ſeveral Medicaments differing in vertues, as muſt be done to make *Confectio Hamech*, may ſerve as an Example of the union of their vertues in the Liquor. Of all which things you ſhall meet with a number of Examples in the continuance of this *Pharmacopœa.*

CHAP. XIX.

Of Humectation and Immerſion.

HUmectation or *Moiſtning*, is us'd at the beginning of Infuſion, but more often practis'd for other uſes. We moiſt'n a Medicament, to ſoft'n it when it is too dry, as when we moiſt'n Mountain *French-Spikenard*, or lay it in ſome moiſt place, that it may be more fit to be made clean: or as when we moiſt'n *Tamarinds* and *Caſſia*, the better to extract the Pulp. We alſo moiſt'n certain dry Medicaments to hinder them from exhaling, while they are beat'n in the Morter, as *Agaric*, *Saunders*, *Coloquinth*, *&c.* as alſo to colour them; as we do by the ſame *Saunders*. We moiſt'n others while we bray them upon Porphyrie, to hinder the diſſipation of their more ſubtle parts, as Coral, Pearls, and Precious Stones. We moiſt'n other Medicaments, to qualifie their acrimonie or their ſharpneſs, as when we moiſt'n *Coloquinth* and *Mirobalans* with ſome drops of Oyl of ſweet Almonds. We alſo moiſt'n others to aſſiſt the penetration of their vertue, as when we moiſt'n *Senna* or *Rhubarb* with ſome drops of juice of Lemmons; or as when we moiſt'n Stomachical, Cordial or Cephalick Medicines with Oyl of Gilly-

Gilly-flowers, Cinnamon, Lavender, or the like. Others we moiſt'n to communicate to them ſome good quality, as when we moiſt'n a Medicament with ſome Diſtill'd-waters, or with ſome proper Decoction; or as when we cauſe it to receive the ſteam and vapour thereof. Irroration, Inſperſion and Imbibition are almoſt the ſame things with Humectation.

Immerſion follows Humectation, and is either for a ſmall time, with an intent to ſeparate ſome ſuperfluity from the Medicament, as when we ſoak Almonds in hot water to peel off their skins: and ſometimes to take away ſome of their vertue; as when we ſteep Rhubarb a little in ſome Liquor to abate its purgative vertue. Or elſe for a longer time, to take away ſome evil taſte from the Medicament, as when we ſteep green Wall-nuts in water and in ſeveral changes of water, to take away their bitterneſs. Or as when we ſteep Olives for a long time in pickle for the ſame purpoſe. Or as when we ſteep Quick-lime in water, to make Lime-water. Or as when we ſteep the peels of Citron and of many other Fruits, to hard'n them, render them tranſparent, and in a better condition to be condited.

CHAP. XX.

Of Nutrition.

Nutrition is uſually done by the help of Liquors: It comes ſomething near the nature of Humectation. It is ſo call'd, becauſe it encreaſes the Medicament, and furniſhes it with a kind of nutriture. It is perform'd two ways; either by mixing or uniting ſeveral Medicaments into one; as when we mingle by little and little and at ſeveral repetitions, Vinegar, Oyl and Litharge, and ſtir them a long time together in a Morter, to make the nouriſh'd ſubſtance of all together: or as when we do the ſame thing with *Saccharum Saturni*, Oyl and Vinegar, or elſe with the tincture of *Saturn* drawn with Vinegar mingl'd with Oyl, to make the Liniment of *Saturn*. The next way is by adding a Juice, a Water, or a Decoction to ſome Medicament, to nouriſh and augment it, or to give it ſome vertue; as when we add the juice of Roſes or Cichory, or ſome hepatic or purgative decoction to Aloes to nouriſh it; and afterwards over a gentle fire evaporate the ſuperfluous moiſture of the ſame Juices, till the Aloes becomes ſufficiently nouriſh'd and charg'd. As alſo when we nouriſh *Sarcocol* with Woman's Milk; or elſe as when for the Preparation of the *Sperniola*, which *Crollius* ſo much commends, we feed *Myrrh*, *Olibanum*, Saffron and Camphire in powder with the Diſtill'd-water of the Spawn of Frogs, which is afterwards reduc'd into a kind of paſte, and laid to dry of it ſelf; repeating the ſame Nutriment and the ſame drying twenty or thirty times.

CHAP. XXI.

Of Diſſolution; Where occaſion is taken to ſpeak of Chymical Solution.

Diſſolution, in *Galenic Pharmacy*, ſucceeds Humectation. It ſerves to render compact and thick Subſtances liquid or flowing, by the addition of ſome Liquor. Upon occaſion we diſſolve Electuaries, Opiates, Confections, Powders, Extracts, Salts, Syrups, and many other Preparations to render them potable. We alſo diſſolve Manna, Sugar, Honey, ſeveral Gums, Tears, Roſins, in proper Liquors. We diſſolve Wax and divers Emplaſters in Oyls to make them ſoft. We diſſolve Gold in *Aqua-regalis*, or in the Spirit of Salt: Silver, Copper, Mercury in *Aqua-fortis*; Pearls, Corals, Crabs Eyes, and ſuch-like Subſtances, in diſtill'd Vinegar, Spirit of Nitre, or ſome ſuch acid Juice. *Mars* or Iron is diſſolv'd in Water by the help of *Tartar*, as alſo in *Aqua-fortis* and corroſive Spirits. The roſinie part of Scammonie, Jalap, Agaric and Turbith, *&c.* Amber-greeſe, Amber, Gum-lack, are diſſolv'd in Spirit of Wine. Gum-Saundarach in the true Oyl of Aſps diſtill'd. In ſhort, ſeveral other Medicaments

may

may be dissolv'd in Liquors which have some correspondency with their substance' *Solution*, in *Chymical Pharmacy*, is the division and dissolution of all the substances that compose a mixt Body. It is the foundaation of all *Chymistrie*, and the encouragement to a great number of noble Preparations which that Art puts in practice. Under Dissolution, you may compute several other Preparations, which may more aptly be plac'd under the title of Coction.

CHAP. XXII.

Of Making hot, or Calefaction.

Calefaction, is the beginning of all operations which are perfected by the means of heat. It differs from *Coction* in this, That what-ever is boyl'd has been well heated, but what-ever is warm'd has not been boyl'd. Nevertheless sometimes we are put to heat again those things which have been boyl'd. We warm Infusions, Tinctures, Decoctions, when they are cold, to the end they may be the better strain'd. We heat, Baths and Half-baths, when we have occasion for them. We warm Oyls, Oyntments, Fomentations, Epithems, Cataplasms, and Emplasters when we apply them. We warm Powder'd-Nutmegs, Line-seed, Annise-seed, and many other such Seeds, when we go about to press out the Oyl. We heat water luke-warm to provoke vomiting. We warm Iron and Brass-morters and Pestles, sometimes to melt certain Gums, as *Taccamahacca*, Mastic, Ammoniac, Galbanum, and the like: sometimes to pulverize others, as *Tragacanth* and *Arabick*; sometimes to pulverize Minerals, as Talk: or to dissipate the superfluous moisture of some Medicaments, and to make them fit to be pulveriz'd, as Saffron, Tabac, *&c.* or else to consume some adventitious moisture of Medicaments compos'd, and to restore them their consistencie and dryness; as in Extracts, Salts, and many other Preparations. We warm infus'd Dates, *Cassia*, and Tamarinds, the better to draw out the pulp; we warm Broth to dissolve *Manna*, though it may be also dissolv'd in cold Liquors. We heat the Vessel of Iron in the form of a horn, when we pour the Antimony in Fusion to separate it from the *Regulus* or Tinnie-dross. We heat our earth'n or glass-Vessels for fear they should break, when we pour scalding Liquors into them. We heat the neck of the Limbeck, especially in Winter, which contains the Antimony and the Sublimate, in the distillation of Oyl of Antimony, to melt it when it is congeal'd there, and to make it drop into the Receiver. We heat Wax, Rosin, Suet and Tallows to melt them. We heat Sea-onions, Purslane, Burrage and Bugloss, and many other Plants, to extract the Juice.

CHAP. XXIII.

Of Insolation, *or Exposing to the Sun: And of the heat of Dung.*

Insolation is the warming of Substances by exposing them to the heat of the Sun. We usually make use of it for the macerating of liquid Conserves, for the macerating of Flowers, or Herbs to be put into Oyls or Fats; for Tinctures, Balsoms, to dry the parts of Plants or Animals, which we intend to preserve or use; to dry Salts; to evaporate Extracts, Juices and Liquors, or to purifie them; to make Wine eager; to assist the Fermentation of *Hydromel*; to separate the black rind of Pepper, as they do in the *Indies*, when they have water'd the ground with salt-water to make the Pepper white: to dry Figs, Peaches, Prunes, and many other Fruits, in hot Countries. It is also serviceable for many other uses.

Horse-Dung being half putrify'd and well pil'd up, affords a heat more or less, according to its quantity, and according as the Substances are either deeper or shallower buried. For the heat may be greater then the hand of a Man shall be able to endure. There is no heat which can be better regulated, or be brought to that equality, as that of Dung, or which approaches nearer to the Natural heat. It is proper to digest liquid matters, or to advance the Fermentation of those which have a natural disposi-

tion

tion to it. Thereby may be made a circulation of divers Subſtances; thereby may Tinctures be drawn forth, Eggs may be hatch'd, and ſeveral Diſtillations made.

CHAP. XXIV.

Of Coction and Maturation.

THE Ancients and alſo the Moderns have defin'd *Coction* to be an alteration of a thing which ought to be boyl'd. Nevertheleſs I do not find this definition to be very exact, if it be not tak'n in a very general ſenſe, which agrees indifferently with all ſorts of Alterations. Since the Alteration may be obſerv'd in all Preparations which are made with and without Coction, and that moreover the diverſity of thoſe which are made with Coction is ſo great, that it is a hard thing to find a definition preciſe enough to agree with all in particular. So that without troubling my ſelf to define it more exactly, I believe it will be enough for me to ſay, in dividing it, That there are ſeveral ſorts of Coctions, and ſeveral degrees of every ſort, according to the various Subſtances of the Medicaments, and the various Intentions of him that prepares them. The Ancients have ſet down ſome ſorts of Coction, and among the reſt Maturation, Elixation, Frying, Aſſation, Torrefaction, and Uſtion. But in regard that beſides all theſe, there are a great number of others which are to be known and practis'd, eſpecially in *Chymical Pharmacy*, I thought it requiſite to diſcourſe of every one in particular, as ſhall be ſeen hereafter.

Maturation is a kind of Coction, ſometimes dry and ſometimes moiſt. For we may roaſt either before the fire or upon the hot Cinders green Fruits, in ſome meaſure to perfect their maturity, and make them fit to be eat'n. They may be alſo bak'd in an Oven, or boyl'd upon the fire in Water, in Muſt, in Honey, in any Juice, or in any other Liquor. There are alſo ſome Fruits, which having been gather'd green, rip'n *in keeping*; as Medlars, which are for that reaſon ſpread upon ſtraw.

CHAP. XXV.

Of Fermentation.

Fermentation ought to be accounted a kind of Coction, being a certain Ebullition which ariſes from the confus'd mixture of two Subſtances, in appearance contrary in their action; which the *Chymiſts* call *Acid* and *Alcali*. This is an Operation ſometimes natural, and ſometimes artificial, which happens to liquid or at leaſt to moiſt Subſtances, either by the help of ſome external heat, or natural heat which is rous'd in the matter it ſelf, by the conflict of Subſtances which ought to be fermented, and which thereby detect an *Acid*; which though but ſmall in quantity at firſt, becomes however powerful enough to agitate the volatile parts of the whole matter, to unite with them, and diſpoſe them to diſingage themſelves from the Terreſtrial and groſs parts that incumber them, and to reject and throw off the one part in ſcum by Ebullition, and the other in Sediment by a kind of precipitation, when the matter is liquid. It becomes alſo ſufficiently prevalent to put them into a condition of being preſerv'd for ſome time without thoſe *Terreſtreities* or earthie parts; or elſe to be made more pure by the means of diſtillation, which ſeparates and raiſes the Spirits above the heavy and unprofitable Flegm, which incumber'd them before; and to become at length perfectly pure by rectification.

We have not any ſubject that more apparently clears this Operation then the Juice of the Grape: which deſerves to be conſider'd, in regard of the ſeveral changes that happ'n to it through Fermentation. Experience teaches us that it is impoſſible to ſeparate its pure and volatile parts if they have not endur'd Fermentation. Which may be obſerv'd in Burnt-wine. For if we take the Juice of Grapes, and let it boyl in a Kettle to the conſumption of the third part, which is the uſual Rule, there will ariſe nothing but the inſipid and unprofitable Flegm. And though in the boyling it be ſe-

parated from its earthineſs, partly in the ſcum, partly in the terreſtrial matter that ſticks to the ſides and bottom of the Kettle like Lees, the ſubtle and volatile parts keep ſtill united with the fix'd and tartareous Salt of the ſame Juice, and the remainder of the Flegm; nor can they be ſeparated but by Fermentation, which afterwards happ'ns of it ſelf, without the concurrence of any external heat; if you put the ſame Juice in ſome meaſure clarify'd, into a proportionable Veſſel, as you would do ordinary new Wine, and leave it ſtanding ſix weeks or two months. For in that time the *Acid*, that lay hid in the proper Subſtance of the Juice, aſſiſted by the nitrous parts of the Air which it has inſenſibly attracted, cuts and ſeparates the thick parts of the Burnt-wine from the pure, throwing off the firſt by the Ebullition which it raiſes, partly in froth through the bung-hole of the Veſſel, and partly to the ſides and bottom; and uniting it ſelf to the latter, by vertue of a particular inclination, not being able however to ſeparate the Flegm which remains, and which will very hardly forſake it. When the Burnt-wine has thus endur'd Fermentation, and that it is well purg'd, if it be put into a Veſſel to ſtill, it fails not to ſend its Spirit firſt, and in greater abundance then the ſame quantity of ordinary Wine would do, which appears to have that third part of Flegm which the Burnt-wine had loſt in burning. And if you continue the Diſtillation, after the Spirit is aſcended, the Flegm which remain'd in the Burnt-wine ſhall riſe alſo like that of ordinary Wine when diſtill'd in the ſame manner.

This ordinary Wine is more eaſie to prepare then Burnt-wine; for it requires no external fire, but only that which is excited by the parts of which it is compos'd, which raiſe the Fermentation in it; which uſually begins in the Tub, where the Juice remains mingl'd with the grounds and ſqueezings of the Skins for ſome days, and ends afterwards in the Veſſels, when the ſettlings are ſunk to the bottom of the Juice. There may be alſo a Fermentation of the Juice of Grapes in the Veſſel, though the grounds be not mingl'd with the Juice; as they never do that put up white and pale Wines. Upon which ſubject give me leave to ſpeak my thoughts, which are theſe, That Wine being compos'd of a *Sulphurie* and *Acid Tartareous* Subſtance, mix'd with ſome Flegm, ſomewhat of fix'd Salt, and ſome earthy parts, is expos'd to ſeveral changes, caus'd by the diſuniting of its Subſtances, or by the predominancy of the one above the other. Whence it comes to paſs that much Rain before or during Vintage-time, makes the Wines to abound in Flegm, and conſequently ſubject to corrupt. Wine is alſo ſubject to corruption and to become fat and oylie, when the volatile Sulphur ſurpaſſes the Tartarous Acid. Which is clearly demonſtrated in this, that if you put ſome Pints of good Verjuice into a Cask of Wine ready to turn greaſie, and in ſome meaſure already become fat, and mingle them together, the Wine will come again to it ſelf. We may obſerve alſo that green Wines, that is to ſay, thoſe Wines which abound in *Acid*, are not ſo ſubject to corrupt, as thoſe which want that *Acid*: and we find that this *Acid* at the latter end of the year turns to Strength.

On the other ſide we may well judge that the corruption which happ'ns to Wine through the want of the *Acid*, does not extinguiſh the volatile ſulphurous part of the Wine, ſeeing that thoſe Wines afford almoſt as much combuſtible Spirit as thoſe which are not ſpoil'd.

I am of opinion alſo that the true and natural alteration of Wine into Vinegar proceeds from no other cauſe, but only for that the *Acid* is increas'd and exceeds the volatile; or elſe becauſe the volatile Spirits being exhal'd, the *Acid* manifeſts it ſelf more openly, and more ſenſibly fixes its impreſſion upon the tongue and the palate. Which happ'ns to thoſe Wines which naturally abound in Tartar and by conſequence in *Acid*, as do thoſe of *Languedoc*, eſpecially when they leave their Casks open, and that the Wines can attract the nitrous parts of the air, to encreaſe thoſe Acids that make up one part of their Compoſition.

There is another natural Fermentation which happ'ns to Subſtances mix'd of *Acids* and *Volatiles*, which are of a ſoft, but not liquid conſiſtency: which comes to paſs by the conjunction of the *Acids* with the *Alkali's*. As we obſerve in Treacle and in ſeveral other Compoſitions; upon which I will not enlarge, for fear of making the Chapter tedious.

Artificial Fermentation is done by adding *Acids* to the Subſtances which you would have fermented. As when we put Leven to Dough, or Yeſt to certain Plants or bruis'd Berries in luke-warm Water, to haſt'n the Fermentation, and afterwards to draw forth the Spirits and Volatil-oyls: as in the Fermentation of Creſſes, Scurvy-graſs, the leſſer Centaurie, Juniper-Berries, and of many other parts of Plants. As for the levening of Bread, that Fermentation cannot actually ſeparate the terreſtrial parts into froth,

froth, or precipitate them to the bottom, as in liquid Substances, for it only op'ns and dilates the Substances; more strictly uniting the acid with the volatile, so that they may be in a condition to receive their last Fermentation in the Stomach, and to the end they may be so well subtiliz'd, that they may with more ease be convey'd to all the parts of the Body for nourishment, leaving the gross and terrestrial parts to be thrown off as real excrements.

CHAP. XXVI.

Of Digestion, and Maceration.

Digestion and *Maceration* are almost the same thing. They require a long time and a moderate heat for their operation. Scorpions are digested or macerated whole in Oyl of bitter Almonds, to the end that by a little and a little they may communicate their vertue to them. New Roses bray'd with an addition of Salt are put into a Vessel exactly stopt, and being left for some months to macerate in a Cellar, there is then an odoriferous Water, Spirit and Oyl drawn from them. The same Roses are a long time laid to macerate, sometimes in Oyl, and sometimes in Hogs-grease, for the making of Oyl, and *Unguentum Rosatum*. Slic'd Dates are oft'n digested in Hydromel, and the pulp drawn forth to make *Electuarium Diaphœnicon*. The heads of Poppies are oft'n digested in Water to make them soft, a little before their decoction for Syrup. Lead slightly calcin'd, Minium, Ceruse and Litharge are digested in distill'd Vinegar, there to be dissolv'd by little and little, either to preserve the dissolution, or to make a Magistery, or else that which they call improperly *Salt of Saturn*. Pearls and Corals are also digested in the same Vinegar distill'd, in the Spirit of Nitre or in acid Juices, to dissolve them sometimes for the making of Syrups, sometimes Magisteries, sometimes Salts, though improperly so call'd, in regard they are no more then the Salts of Vinegar distill'd. The filings of Steel are laid to digest in Spirit of Vitriol, to make *Vitriol of Mars*. The Spirit of Wine and the Spirit of Vitriol being mingl'd together by equal weight, are put to digest in an Iron-Skellet, there to be incorporated and reduc'd to a whitish Substance, which is call'd *Salt of Mars*. Jalap, Scammony, Agaric, *&c.* are laid to digest in Spirit of Wine, there to dissolve the rosinie part, and to separate the terrestrial. Opium is laid to digest first in Water, there to dissolve the watry part, and then in Spirit of Wine, there to dissolve the rosinie part which cannot be dissolv'd in water. Several other Substances are also digested in divers other Liquors; the enumeration of which would tire the Reader.

CHAP. XXVII.

Of Tincture, and Circulation.

Tincture usually calls Digestion to its assistance. It is made use of to the same purpose as Infusion, and chiefly to impart to some Liquor the Vertue or the principal Substance of some Medicament. It is call'd *Tincture*, because the Liquor generally becomes colour'd in the Operation. The pure and rosinie part of Benjamin is dissolv'd in Spirit of Wine, which gives it a light purple colour. Coloquinth cleans'd from its grains, cut and digested in Spirit of Wine, receives a yellow tincture, which *Martin Rouland* calls *The gilded Spirit of Life*. Aloes, Myrrh, and Saffron pulveriz'd and digested in Spirit of Wine, yield a swarthy-red tincture to make the *Elixir proprietatis* of *Paracelsus*. The Rose, the Violet, Rhubarb, Senna, Cassia, and many other Medicaments impart their tincture to watry Liquors, to which the addition of some Spirit or acid Juice, or some fix'd Salt, may very much conduce, as well to hight'n the colour of the Tincture, as to make them more strong of the vertue of those Substances which are steep'd therein.

Circulation cannot operate without Digestion, no more then *Tincture*. It is us'd for Liquors impregnated with the Substance of Medicaments; or for those that have sub-

ſtantial Medicaments ſoaking in them. It is done by putting the Liquors in a Veſſel to circulate, being all of one piece and cloſe ſtopt at the top: or elſe of two pieces, that is, of two Veſſels fix'd one upon another, and well-luted together; of which the lowermoſt muſt contain the Liquor. The Circulation is made by a fire of Lamps, or a bed of cinders or ſand moderately hot, or in Dung, or in the Sun. It requires moſt commonly a continu'd heat for ſome days, and ſometimes prolong'd to the number of weeks and months. By Circulation the moſt ſubtile matter aſcends to the top of the Veſſel, and not finding any out-let, is conſtrain'd to fall down again, and rejoyn with the Subſtance at the bottom of the Veſſel, from whence it was rais'd. And thus continuing to aſcend and deſcend in the Veſſel, it makes a kind of Circulation, the Name whereof the Operation bears; and by the ſeveral penetrations and agitations of the Spirit full with the groſſer parts, the firſt become more thin and in a better condition to act, when they are ſeparated from the latter. This Operation is principally in uſe in *Chymical Pharmacy*. It wholly diſpoſes the Liquors to the ſeparation of their pure parts from the impure, ripening and perfecting their active principles, and rendring them fit to be made volatile, and to be united afterwards to other purify'd Subſtances, if there be occaſion.

CHAP. XXVIII.

Of Cohobation.

Cohobation is a repeated Sprinkling of the diſtill'd Liquor upon the Subſtance from whence it was drawn, to the end the ſaid matter may be diſtill'd again. This Sprinkling is repeated ſeldomer or oftner, according to the diverſity of Subſtances which are diſtill'd; and as the purpoſe of the Artiſt requires. It is us'd moſt frequently us'd to op'n and diſſolve the parts of mixt Bodies, which you deſire to have diſtill'd, to which the repeated Sprinkling of the Spirits already drawn forth very much conduces. This Operation may in ſome meaſure be thought to do the office of Circulation, by yielding at length a Liquor containing the moſt eſſential part of the mixt Body. Cohobation is chiefly us'd in the diſtillation of ſpiritful Aromatic-waters, and the diſtillation of their Oyls, to have them more pure and in greater quantity.

CHAP. XXIX.

Of Elixation.

Elixation is the boyling of a Medicament in ſome Liquor different from it, according to the diverſity of the Medicament, and the various intentions of the Artiſt. It is to endure a longer or leſſer time, as the Medicaments are more or leſs ſolid. Generally Fountain or River-water is more us'd in Elixation: but ſometimes Mineral-waters, Lyes, Rain-water, Dew, Snow and Sea-water may be us'd as well. Milk, Whey, Hydromel, Wine, Vinegar, Beer, divers Juices of Plants, Diſtill'd-waters, Oyls, Fats, as alſo the Urines of ſeveral Animals, are many times more properly ſerviceable.

The moſt uſual intent of Elixation is to impart the vertue of the Medicaments to the Liquors: As many times it happ'ns in ſeveral Decoctions made for Apozemes, Potions, Clyſters, Fomentations, Baths, *&c.* as alſo for Syrups, Electuaries, Oyls, Oyntments, *&c.* Sometimes it ſerves to take away the Crudity of the parts of Animals or Plants; to ſoft'n them; and not only to make the things boyl'd, but the Broth it ſelf uſeful: as in the Elixation of Fleſh, Roots, Herbs, and Fruits which we eat. It is uſeful alſo to take away from any Medicament or Aliment any ill taſte, or ill quality, as from Colli-flowers and Champignons which are boyl'd in two Waters, the firſt of which is thrown away, and with it the hurtful Juice of the Colli-flowers and Muſh-rooms. It alſo ſeparates the earthy and groſs parts of Medicaments: as in the Elixation of Salts, Sugar, and Honey, to take off the ſcum. It ſerves alſo for the preſervation

vation of Medicaments, as Syrups, Honeys, and Robbes. Upon Elixation attend the following Operations.

CHAP. XXX.

Of Ebullition, Deſpumation, Streining, and Filtration.

E*Bullition* (which is a gentle ſeething to bubbling) is oft'n-times neceſſary at the end of Infuſions; almoſt at all times in Elixations, and many times in Purifications. We boyl Decoctions of the parts of Plants and Animals, Syrups, Unguents, Electuaries, and an infinite ſort of other Compoſitions; ſome more, ſome leſs.

Deſpumation, is practis'd in ſeveral Elixations, eſpecially in that of Victuals, Sugars and Honeys. However Boyling or Ebullition always precedes; which ſeparates and raiſes above the Liquor the groſs, terreſtrial and viſcous ſuperfluities like a froth.

Colature or Straining, is uſually next in order to Ebullition and Deſpumation. But it may be done upon other occaſions and at other times, like Filtration. They are both uſeful in each *Pharmacy*, in the preparation of an infinite ſort of liquid matters, the dregs whereof are diſpos'd to be ſeparated, either by Reſt, Digeſtion, Circulation, Fermentation or otherwiſe. It is uſeful alſo in the ſeparation of filth and other impurities, which are apt to be mix'd with the Liquors. It is alſo uſeful to ſeparate the moiſture of ſeveral Subſtances deſign'd to be dry'd. It alſo ſeparates the watrie from the oylie Subſtances.

Liquors are ſtrain'd through hair, through linnen, through woollen, ſometimes through a looſe cloth, and ſometimes through a Bag which we call *Hippocrates Breeches*. Liquors are filter'd variouſly: for ſometimes we make uſe of Cotton-weeks, or Flax, or elſe of little pieces of white cloth as long as a Man's hand, and two or three fingers broad, which muſt be firſt wet in ordinary Water; then having wrung the moiſture out, and leaning the Veſſel that contains the Liquor upon one ſide, you muſt put in a third part of the length of your cloth into the Liquor you intend to filter, the other part hanging over the Veſſel, ſo that the clearer part of the Liquor falls into another Veſſel, which is plac'd below the former to receive the Liquor, if it be of any conſequence. For by this means the Liquor diſtils through the cotton or cloth, and rids the Subſtances of the greateſt part of their moiſture, if it be ſuperfluous; or elſe the oyls that ſwim at the top are ſeparated from the moiſture that bears them, provided you take care from time to time to ſtoop the Veſſel as it empties. This Filtration is oft'n made uſe of, for the ſeparation of Waters us'd in the lotion of Minerals. Several Liquors are alſo filter'd through a ſheet of brown Paper, extended upon ſome clean linnen, or elſe made up like a horn, and put into a glaſs or white Iron-Tunnel. Sometimes alſo Liquors are filter'd through a heap of beat'n-glaſs, plac'd below a glaſs-Tunnel. And thus Spirits of Vitriol, Nitre, Salts, Sulphur, *&c.* are filter'd, when they are charg'd with any earthineſs, which ſometimes mixes with them in luting and unluting the Veſſels. This ſort of Filtration is abſolutely neceſſary for theſe corroſive Spirits: for they eat and penetrate paper, cloth, or cotton too ſoon. Filtration through brown Paper in a glaſs-Tunnel, is us'd for watrie Subſtances to ſeparate them from the oylie, which not being able to paſs through the Paper, remain in the filter, and are drawn forth and ſeparated by putting the bottom of the Tunnel in the neck of ſome proper Bottle, and piercing the end of the Paper with a ſilver or ſteel Bodkin, or elſe with a Scewer. And theſe are the moſt uſual ways of filtring and ſtraining.

CHAP. XXXI.

Of Clarifying, and Preſſing forth.

C*Larification* happ'ns of it ſelf oft-times to ſome Liquors; only by ſtanding-ſtill, eſpecially after Digeſtion, Circulation, and Fermentation: But the moſt common and quickeſt way of Clarification, eſpecially in *Galenic Pharmacy*, is made by Ebulli-

tion,

tion, Deſpumation, Streining or Filtration. Sometimes the whites of Eggs are alſo made uſe of; and then they are ſtirr'd and beat'n among the liquid matters, which are to be clarify'd, before you make them boyl; eſpecially among Sugar, Honey, and Gellies. To which we add white Wine to clarifie them well. Sometimes we pour a little Vinegar, juice of Lemmons, Barberies, Verjuice, or ſome drops of Spirit of Vitriol, or Sulphur; or elſe Creme of Tartar, Mineral-Chryſtal, or Nitre purify'd, to make a kind of Precipitation, or at leaſt a Separation of the groſs matters from the pure liquids, and ſo to diſpoſe of the firſt as to remain in the Filter.

Expreſſion or Preſſing forth ſometimes precedes Clarification, eſpecially in Decoctions, when they are to be ſeparated from their grounds. There is a greater or leſſer ſtrength to be us'd, according to the intrinſecal worth of the Medicament, and the Nature of the Subſtances either thick or thin. The Expreſſion of the Decoction of the parts of Plants in any Liquor, is generally the moſt eaſie and ſlighteſt of all, unleſs you meet with Laxatives or Aromatics whoſe vertue is very conſiderable. The Preſſing of Plants for the Juice, muſt be ſtronger; and ſome Plants, eſpecially thoſe that are of a viſcous nature, ought to be heated before. The ſame method is to be obſerv'd very near in the preſſing of watry Fruits: the expreſſion of infus'd Oyls, Unguents and watry Gums muſt be with an indifferent ſtrength. The expreſſion of oylie Fruits and Seeds, as Almonds, common Wall-nuts, Filberds, Nutmegs, Benne, the great cold Seeds, thoſe of Anniſe, Poppies, *&c.* requires an extraordinary ſtrength.

CHAP. XXXII.

Of Aromatization, and Colouring.

Aromatization and *Colouring* oft'n meet with Filtration and Clarification. They are alſo us'd in ſeveral other Preparations. Aromatization is uſeful as well to augment the vertue of the Medicaments, as alſo to render them more pleaſing to the ſcent and taſte. We mix in Powders Subſtantial-Aromatics, as Mace, Cinnamon, Cloves, Saffron, Musk, Ambergreeſe, and ſeveral others. They are alſo mix'd in Opiates, in Electuaries, Confections, Pills, Trochiskes; as alſo in Oyntments, and Emplaſters. They are alſo mix'd in Infuſions, Tinctures, Elixirs; as alſo in Decoctions and Syrups. But this muſt be underſtood by the way, That the principal parts of Aromatics, being thin and volatile, cannot long endure the fire without diſſipating thoſe parts. So that they are not to be mix'd till laſt of all; and great care muſt be tak'n to cover the Veſſels at the ſame time, to prevent the diſſipation. To which the Ancients having a great regard, were accuſtom'd to put their Cordial Aromatic Powders into a Cullender or Wooll'n-bag, through which they ſtrein'd their Apozems or Decoctions, when they intended to aromatize them: being of that opinion, That the heat of the Decoction was ſufficient to attract and retain the vertue as it paſs'd through, and that there was no need of a ſtronger heat. But now we have ways more proper and convenient to aromatize all ſorts of Remedies, in regard we can put into them the Oyls of ſeveral Aromatics, which *Chymiſtrie* teaches us to diſtil, and which contain the true ſulphurie, aromatic and eſſential part of the Subſtance. Theſe Oyls incorporated in drops with forty or fifty times the weight of fine powder'd Sugar, are in a condition to be united and effectually mix'd in all ſorts of Liquors and Medicines, and to render them more aromatical, pleaſing, and of greater ſtrength, then the Subſtance of Aromatics us'd as the Ancients were wont to do, according to the Precepts of *Galenic Pharmacy*.

The Colouring of Medicaments is Natural or Artificial. The Natural is two-fold. For either it is ſuch as Nature produces, as White in Snow or Milk, Red in Blood, Yellow in Gold, Sad colour in Lead or Antimony, *&c.* or ſuch as length of time, or ſome other accident alters; as the whiteneſs of the Hair through Age, Paleneſs of the Face through Sickneſs. Artificial happens either through Fermentation, as to divers Juices; or by Digeſtion, as to Tinctures of Tartar and Coral; or by Agitation, as in the white colours of Pomatums, or *Galen*'s Sear-cloth; or by the mixture of different Subſtances: of which ſome may change or height'n the colour of the Medicament by its acidity, as divers Spirits do; others dye with their own colour, as red Sanders, Dragon's blood, Indigo, Verdigreece, Cochenille, Saffron, and many other things. Or by

by Washing and exposing to the Sun, and the Air: as the white colour of Wax, Oyl of Eggs, and several other things. Or by Coction, or Calcination, as it happ'ns to Mercury, Lead and Antimony. In short, the change of colour may happ'n to Medicaments a thousand ways, fore-seen, and not fore-seen, which it would be too tedious to relate.

CHAP. XXXIII.

Of Frying, Assation or Roasting, Torrefaction.

Frixion or Frying, is usually done in a Frying-pan, with the addition of some Liquors, especially Oyl or Suet. It is done with less Liquor then ordinary boyling, and upon a quick fire for Meat; but with very little liquor and over a moderate fire for Medicaments, to prevent dissipation of their good parts. Eggs are first boyl'd in Water, and when they are hard, the yolkes are tak'n out, and fry'd over a moderate fire, till their oyl begins to appear in the Frying-pan; then pour upon them a little Spirit of Wine, and immediately put them into a coarse Linnen-bag, and press them strongly to get out the Oyl. Mirobalans in powder must be gently fry'd, pouring upon them a little Oyl of sweet Almonds to temper their asperity.

Assation, is the Coction of Food or Medicaments in their proper juice, without the addition of any moisture or basting extraordinary. Thus Meat is roasted upon a Spit, or upon a Grid-iron. We roast Water-nuts, or Saligots, Chest-nuts, Apples, Pears, and many other Fruits and Roots in their own juice, either upon the coals before the fire, or otherwise. We bake in the Oven Squills, Onions, red Parsnips, and several other Roots and Fruits without the addition of any moisture. We also bake Meat in the Oven, and dry the parts of Animals as the Blood, the Secondine, *&c.* and some Animals whole, as Moles, *&c.* We roast Coffee upon a Spit, in a Tin-box; all which several wayes may pass under the Name of Assation.

Torrefaction is an abatement of Assation; it is us'd in dry Medicaments that abound in strength. It is chiefly us'd for Rhubarb and Mirobalans beat'n to powder, and spread upon a silver-Plate or a thin piece of iron, set upon a Chaffing-dish. They may be also torrefy'd over a moderate fire, stirring them oft'n with a Spatula or little slice, till the powder begins to look of a darkish colour; which is a sign that the purgative Faculty is quite gone, and that the astringent only remains.

CHAP. XXXIV.

Of Ustion, Cineration, and Extinction.

Ustion or Burning has its differences and degrees, according to the diversity of the Substance of the Medicaments, and the various purposes of the Artist. The Ancients made use of this Preparation for Animals, Plants and Minerals. They burnt the Horns, the Hoofs, the Bones, the Flesh, the Feathers, the Hair and all parts, not considering, that what-ever Animals have of essential in all their Bodies, consists in their volatile salt and oyl, which by Ustion are dissipated and exhal'd. I desire the Reader to take the pains to view my Preparation of Vipers, and to examine the reasons which I have to condemn in that particular the proceedings of the Ancients, as also the burning of Harts-horn and Ivory; an errour which some to this day can hardly avoid committing. Indeed we burn to good purpose several sorts of Wood, as well to warm us, as to dress our Victuals, and draw out their salts: We also burn several Plants and their parts to extract the salt: But neither the salt of the Wood nor of the Plants can be drawn out by bare Ustion, which only reduces them to coals; so that it is absolutely necessary to reduce that coal into ashes, to draw forth the Salt. And this is call'd Cineration, which is done by a long and continu'd Ustion, especially of Wood or other parts of Plants. It being certain, that in the change which Ustion makes of Wood into coal, that the flegm, spirit and oyl of the Wood are totally dissipated, if the Wood be well burnt; and that the little moisture which is drawn forth by the distillations of ordinary coals, is only borrowed from the Earth, or from the Substances wherewith the *Colliers* extinguish their coals;

and

and that the hurtful vapours which ascend from the coals while they burn, proceed from the nitrous and sulphurie parts, and from those other Substances of which they are compos'd. You may know the nitrous and sulphurie parts, which that moisture contains, by the precipitation which may be made thereof, if you throw Spirit of Vitriol upon it. We may also alledge, That the hurtful vapours that proceed from ordinary coals, proceed from something else besides its own proper Substance; seeing that the coals of a fire that go out of themselves in the op'n air, is not capable of doing any harm when it is lighted again; nor need we to wonder at it, in regard those coals contain nothing considerable, but the terrestrial and salt part which remains in the cinders, after the coal is consum'd. It is also observable, that after you have drawn through a Retort the spirit and oyl of Woods by a long-continu'd fire, and violent too at the end, you shall find in the Retort the Wood converted into coal, by distillation depriv'd of all that flegm, spirit and oyl which it contain'd; and that though you keep a violent fire to the same coals in the Retort, provided with a Receiver very well luted, they will nevern turn to cinders, but preserve their shape of coals: Nor can they be reduc'd to cinders without the help of the Air, which assists the activity of the fire, dissipates that part of the coal, to which *Vanhelmont* gives the Name of *Gas*, makes the coal to lose its shape, and reduces it to cinders.

You shall find in the latter part of this *Pharmacopœa*, the way how to separate the Salt matter from the Terrestrial, which are the two Principles of which cinders are compos'd, and which remain in the Coal after the separation of the other Principles.

The strong Ustion of Minerals, ought to be refer'd to Calcination. Ustion in a lesser degree, which is not at all destructive, may in some measure be comprehended under it, though to speak properly, it onely ought to be call'd a Heating red-hot; as for Example we heat *Tutia* red-hot three times in the fire in a Crucible, and quench it as many times in Rose-water, to repress its acrimonie; we also heat red-hot in the fire a square piece of Steel, and quench it as often in water, to make it astringent.

Extinction or Quenching, is practis'd upon Minerals that have been heated red-hot in the fire, and are afterwards quench'd in certain Liquors. This Quenching or Extinction is made use of to abate their acrimonie, as I have said of *Tutia*; or to impart their vertue to the Liquor wherein they are quench'd; as that of Steel to Water; of Bricks to Oyl, to make Philosophers Oyl: It serves also to make certain Minerals brittle, as when we quench red-hot Flints in Water. We call, but improperly, by the name of Extinction, that of Flowing Mercury, when we take away the fluidness thereof, by the assistance of Turpentine, or any other viscous matter. But this Extinction is not to be refer'd to those of which I have already spok'n, which must be preceded by Ignition or heating in the fire the Substances you intend to quench.

CHAP. XXXV.

Of Calcination.

Calcination is the turning of a Medicament into Lime, by the help of a violent fire; it is of great use in *Chymical Pharmacy*, and chiefly for Minerals, whose substance is more solid than that of Plants and Animals. Calcination is divided into Actual and Potential: Actual Calcination is perform'd by the Fire; Potential by corrosive Spirits. Minerals require a less or bigger fire, according to the diversity of their substances, and according to the various purposes of the Artist. Calcination of Lead into grey powder inclining to yellow, requires much less fire then other Calcinations of that Metal. The Calcination of Oyster-shells is much sooner done then that of Lime, which serves for building. There is less fire requir'd to calcine Antimony into a grey powder, then to calcine it into a white powder, which is call'd Ceruse of Antimony, or Antimony-diaphoretic; or then is requir'd to convert it into Saffron, Regulus, or Glass. The Actual Calcination of Minerals, is perform'd sometimes without addition, as the simple Calcination of Lead, Antimony and Steel, *&c.* sometimes by the addition of Sulphur, Nitre and Tartar, *&c.* The Potential Calcination of Metals, is also call'd Immersive. It is made by the means of corrosive Spirits, which penetrate and dissolve them. So Gold is dissolv'd in *Aqua-Regalis*, or by Spirit of Salt well purg'd from its flegm. Silver, Copper, Mercury, Saturn, Mars, *&c.* by the Spirit of Nitre, or

Aqua-

Aqua-fortis, or by other corroding Spirits; and so are all the rest. It is call'd Immersive, because the Minerals are steep'd in the corroding Liquors, to the end they may lie in soak there till they are calcin'd.

CHAP. XXXVI.

Of Amalgamation, Fumigation, Cementation, Stratification.

Amalgamation, is a Potential Calcination, which is made of Gold and Silver, by the means of Quick-silver, which being mingl'd either with the one or the other of these Metals when it is melted, separates their parts, and for a time so effectually mixes it self with them, that the whole becomes an unctuous paste that may be extended upon the hand. This paste being afterwards put into a Crucible and set upon the fire, loses its shape and consistency; for when the Mercury has forsak'n those perfect Metals by evaporation, they appear at the bottom of the Crucible, like Lime, much more fine then it could possibly have been made by any other Operation.

Fumigation, is also a Potential Calcination, by which the Mercurie put upon the fire in a Crucible, the mouth whereof must be somewhat streight, corrodes and reduces into Lime the thin plates, which hang over it to receive the vapour of the Mercury. Saturn in plates hung in that manner, so that it may receive the vapours of Vinegar set upon the fire, will be also corroded by that means, and the superficies thereof converted into a white Lime, which is the true Ceruse. This Fumigation is call'd Evaporating-calcination. Fumigation made by the means of Sulphur kindl'd, is made use of to abate the purgative Faculty of Scammony, by the penetration of the acid of the same Sulphur into all the parts of the Substance of the same Scammony, and by the change which it produces by the uniting it self to it. But this is no Calcinating-fumigation, like those of Mercury and Vinegar. I let alone those Fumigations which are rais'd from Aromatics, which are onely exhalations of the more odorific parts of those sorts of Substances, which never change the nature of those that receive them, no more then of their form, but only leave the scent of their odours behind them.

Cementation, is yet another sort of Calcination, whereby the imperfect Metals, which are mix'd with Gold and Silver, extended upon small and very thin Plates, are calcin'd and destroy'd, so that the perfect Metals become rid of them and absolutely pure. It is call'd Cementation, because of the Cement in powder, with which the thin Plates are strow'd all over, by means of the Stratification which is us'd in the Crucible, that is afterwards cover'd and luted extraordinary close; and then put in a Gradual wheel-fire for some hours, till the perfect metals are melted, which is the last period of Cementation.

Stratification, or the laying of things in rows or beds, is done by covering the bottom of the Crucible with a powder for Cementation, upon which are laid certain thin Plates of Gold or Silver, which must be cover'd again with the powder; then lay other thin Plates upon that powder, and then more powder upon those Plates, continuing so to do alternatively, and ending with the powder with which you began; then cover the Crucible and lute it exactly, and put it in the wheel-fire, as has been said already in Cementation. Stratification is also made use of upon several other occasions, where Cementation is not necessary.

CHAP. XXXVII.

Of Fusion, Granulation, Projection, Detonation and Fulmination.

Fusion belongs only to Metals, and Mineral Substances, which are put into a Crucible, and expos'd to a violent fire, till the Substance is melted. The Salts of Plants are also melted in the same fire to vitrifie them.

Granulation cannot be done without Fusion; and it is consequent to it. It is chiefly practis'd upon Gold or Silver melted together or separately. We softly pour these

Metals into cold water when they are well melted, for then you find them in graines at the bottom of the Veſſel. You may alſo lay ſome twigs of a Broom upon the top of the water, the better to divide the melted Metal, and to make the graines leſſer: There are others that for the ſame purpoſe, will run them through Paper pierc'd full of holes with a Bodkin, and rubb'd with Orpiment.

Projection is made after the following manner. You muſt place a Crucible, or an Aludel upon a round of bak'd earth about two fingers thick, and ſufficiently broad, which the *Chymiſts* call *A Culotte*, to ſet the Crucible or Aludel upon. This Round muſt be ſet with the bottom downwards upon the middle-grate of a Wind-furnace, kindling a Charcoal-fire round about the Round of bak'd earth, and the Crucible or Aludel. The Crucible being well fortify'd with its cover, and the Aludel with its ſtopper. The fire muſt be continu'd till the Crucible or Veſſel be red-hot; at what time you muſt throw into either an ounce of that Subſtance which you intend to project, making uſe for that purpoſe of a Ladle, or Iron or Copper Spatula with a long handle, able to contain as much as you are to throw in at a time, but not bigger then the cover of the Crucible or the Aludel. At the ſame time you muſt alſo cover the Crucible, or ſtop the Aludel; and when Detonation is paſs'd, you may op'n them again, and throw in as much new matter as at the firſt time, then cover them again, and continue the ſame Projection till all the matter be projected, or that the Veſſels are able to contain no more.

Detonation uſually accompanies Projection. It is advanc'd by the Nitre, which is the moſt powerful agent in matters to be projected. It is alſo ſucceeded by Fuſion, to which the force of the fire, and the activity of the Salt-Peter compel the Subſtances. The moſt familiar happ'ns in the Preparation of Diaphoretic-Antimony, made by Antimony and Salt-Peter: in that of *Sal-Polychreſtes*, made of Nitre and Sulphur; and that of Flowers of Antimony, with the ſame Nitre. Projection ought to be made of a ſmall quantity, and at ſeveral repetitions. For if you ſhould put too much Subſtance at a time, the violent activity of the Nitre would break all the Veſſels, or make the Subſtances run in the fire. *Detonation* raiſes the impure and volatile Sulphur from the matters, partly into the air, and partly immediatly above the more pure maſs. The terreſtreities are uſually found mix'd with the volatile parts, of the impurities whereof they are the cauſe. But the principal internal Sulphur is found in the pure maſs: which by reaſon of its weight, quits the impure parts, to deſcend to the bottom of the Veſſel.

Fulmination, which is alſo call'd *Fulguration*, is much more violent then *Detonation*, eſpecially that which is us'd to one particular Preparation of Gold. It is ſo call'd becauſe it acts like thunder, working its effects from top to bottom, according as the matter finds reſiſtance at the top. Fulmination of Gold happens through the union of *Aqua-regalis* with it in diſſolving it, as alſo of the Salts of the Tartar, united with it when the Gold was precipitated into Lime. Whence it comes to paſs, that this Lime of Gold precipitated, retains ſtill ſome particles of the Salts, eſpecially of the Ammoniac contain'd in the *Aqua-regalis*, to produce Fulmination upon the leaſt heat that ſhould happ'n to the Lime of Gold. And this Fulmination is no otherwiſe made then by the forc'd diviſion of the Salts from the Gold by the means of the heat. There is another Fulmination leſs violent, which is made by the Salt of Tartar, Nitre and Sulphur, in a certain proportion: which is not ſo dear as that of Gold, and is more eaſie to do; the deſcription whereof is in the third part of this *Pharmacopœa*.

CHAP. XXXVIII.

Of Reverberation, Lapidification, and Vitrefaction.

Reverberation ſerves to open, ſeparate and calcine the Subſtances of mix'd Bodies, by means of a flaming fire, that encompaſſes and reflects upon the matter. It alſo ſerves to take away the corroſive Spirits of Nitre, Salt and Vitriol, as alſo by means of the Retort to ſeparate the volatile parts of certain Plants and of all Animals. It is two-fold; one done with an open fire, which is that of Calcination; the other with a cloſe fire; as is that of Diſtillation.

Lapidification is the converting of more then one Medicament into the form of a ſtone. Which comes to paſs by the diſſolving any Metal in a corroſive Spirit, and

cauſing

causing the dissolution to boyl to the consistency of stone. As when we dissolve Silver in *Aqua-fortis*, and boyl that dissolution to the consistency of a stone, which they call *Infernal*. Divers fix'd Salts are also converted into Fix'd-stones. We also turn into stone Vitriol, Alum, Salt of glass, and many other Salts of Plants, mix'd with Bole-Ammoniac, of which is made the *Medicinal Stone*. Many artificial Marbles and Jewels may be also made by several Preparations.

Vitrification by means of a violent fire turns some Substances into glass. It is practis'd upon Metals, Metallics, and several sorts of Minerals: among the rest upon Stones, Flints and Sands, as also upon the Ashes of divers Plants.

CHAP. XXXIX.

Of Precipitation.

Precipitation is effected when a Medicament, dissolv'd by any fix'd corrosive Salt, or by some acid gnawing Spirit, or by some homogeneous volatile Spirit, quits the dissolvent, and precipitates or falls head-long to the bottom of the Vessel. To hast'n it, we must make use of Precipitants, which at least in all outward appearance are of a nature quite contrary to the Dissolvents; and which may either joyn with them or make a confusion among them, or weak'n them, and so by some means or other constrain them to quit the Body which they held in dissolution. When we have dissolv'd Pearls or Coral in the Spirit of Nitre, or Vinegar, we usually have recourse to some fix'd Salt, as that of Tartar, the Liquor whereof being pour'd upon the dissolution, unites with the acid Spirit which was in the dissolvent, and constrains the Substance of the Pearls and Corals which it dissolv'd, to precipitate to the bottom of the Vessel. When the flowers of Sulphur have been dissolv'd with Salt of Tartar, we must have recourse to some acid Spirit, as that of Nitre or Vinegar, or some acid Salt, as Alum dissolv'd in Water, to make the Precipitation. Mercury dissolv'd in *Aqua-fortis*, or in Spirit of Nitre, is precipitated by Sea-water. But because Sea-water contains in its composition an acid part, which in some measure counterballances the fix'd parts, it does not act so powerfully for precipitation of Mercury as Salt of Tartar, which is void of all acid Spirit, and therefore proper to embrace the acid Spirit which dissolv'd the Mercury, and to compel the one to quit the other. But as it acts with more violence than Sea-salt, it leaves in the Mercury a kind of a red colour. Whence it comes to pass, that we never use any other then Sea-salt when we desire that the Precipitate should be white. However there is another white Precipitate to be made of Mercury, by precipitating it with Salt of Tartar, if you make use therein of Mercury sublim'd and dissolv'd in Water of Sal-Armoniac: which after it has corrected the impressions which the Salt and the Vitriol had left in the Mercury by its sublimation, causes the Volatile Sal-Armoniac to meet with the Salt of Tartar, which is in some measure homogeneous to it. And in regard the Dissolution of Mercury sublimated in Water of Sal-Armoniac is done without any violence, as is also the conjunction of its dissolution with that of Salt of Tartar, the white which is common to both Salts, suffers no alteration, and the acrimony of the Salts fails not to be carried away by Lotions. Tartar is also proper to precipitate all sorts of vitriolated Dissolutions. Bismuth dissolv'd with Spirit of Nitre, is properly precipitated with Sea-water: But it may be also precipitated by common-water only pour'd in a good quantity upon the Dissolution: which finding it self weaken'd by the Dissolvent, abandons the dissolv'd Bismuth, and gives it opportunity to precipitate to the bottom. The Dissolution of the rosinie part of Scammony, Jalap, Agaric, and the like made in Spirit of Wine, as also that of Amber, and several other bituminous Substances, are easily precipitated by weakning the Spirit of Wine with Water. Or else you may attain your end by drawing forth the Spirit of Wine by a soft Distillation, or else causing it to evaporate insensibly: For you shall find the rosinie or bituminous matter at the bottom, accompanied with an unprofitable moisture, distinct, which is to be thrown away.

I do not account that Precipitation of Mercury, which is commonly call'd Red-precipitate, to be one of these Precipitates: which is only a real potential Calcination of Mercury, by the means of Strong-water or *Aqua-fortis*, or Spirit of Nitre, which afterwards they evaporate without pouring any precipitating Salt upon it.

CHAP. XL.

Of Sublimation.

Sublimation is practis'd upon dry Subſtances, ſome of which are either rais'd almoſt altogether, or in part towards the upper part of the Veſſel proper for Sublimation, and that by means of a gradual fire. Medicaments are ſometimes ſublim'd without any mixture, and the more pure parts are ſublim'd like Flowers, leaving the thicker parts at the bottom. In this manner are the Flowers of Benjamin, Storax, and Arſenic, *&c.* prepar'd. Thus may Sulphur be ſublim'd with an addition of ſome other matter: and it is obſervable that it will almoſt all mount up in Flowers, unleſs it be extraordinarily charg'd and load'n with external terreſtreities. Sublimation is alſo us'd to ſeparate the volatile Subſtances from the fix'd; as when we ſublime in Flowers the volatile part of Sal-Ammoniac, and reſerve the ſalt part fix'd at the bottom mix'd among the acid. Mercury is alſo very much inclin'd to Sublimation, and to take ſeveral ſhapes according to the variety of the Subſtances with which it is mix'd, which will cauſe it to act as differently. However it cannot be ſublimated unleſs it be mix'd with corroſive Subſtances, or at leaſt with ſuch as may put a ſtop to its fluidity; nor without borrowing alſo ſome particles of thoſe forreign Subſtances, to elevate it ſelf and to incorporate with them: Then it ſublimes altogether, provided it be perfectly united with them, and that you have obſerv'd proportions in mixture and degrees of fire.

Fluid Mercury is incorporated with a certain quantity of Salt decrepitated, and Vitriol dry'd to whiteneſs, and it is ſublimated by a gradual fire in a conſiſtence white and corroſive, which is call'd Sublimate corroſive; ſo become, by reaſon of the particles of Salt and Vitriol which have been rais'd with it in Sublimation, and which make it a moſt dangerous poiſon. The ſame Mercury ſublimate-corroſive mix'd and perfectly united with three fourths of its weight of fluid Mercury takes off the acrimonie of the Salts, and that little corroſion which might remain in that Mercury-ſublimate, might perhaps be altogether carry'd off, by reſubliming it two or three times without any addition. This Mercury ſo ſublimated is call'd Sweet-ſublimate, or *Mercurius dulcis*, the internal uſe whereof is frequent in the cure of ſeveral Diſtempers, eſpecially Venereal. Mercury is alſo ſublimated in a very red and ſhining conſiſtency, having been formerly well united with a certain quantity of Sulphur. This Mercury ſo ſublimated we call Cinnabar, and is uſually made uſe of in Perfums for Venereal diſtempers. It is uſeful alſo in painting, and to colour Spaniſh-wax. I ſay nothing of the Preparation of the Flowers of Antimony, and ſeveral other Minerals, which I refer to their proper place.

CHAP. XLI.

Of Diſtillation.

Diſtillation is an Elevation attended by a Deſcenſion of the watrie, ſpiritful, oylie or ſalt parts of mixt Bodies, ſeparated from the groſs and terreſtrial by means of the Fire. The natural Aſcenſion or Elevation is that of Rain, Dew, Miſts, which aſcend in vapor up into the Air, and being there gather'd in a body together fall afterwards by the force of their own proper weight, either in Springs of Water divided, or elſe in drops or in leſſer parts, according as the vapors are more or leſs abounding, or that they are more or leſs agitated by the winds; and which in falling make a kind of Diſtillation. The artificial Diſtillation is uſually made after general ways: of which the firſt is call'd the Streight, the ſecond the Oblique or Lateral, the third by Deſcent. Both the one and the other are made into divers Veſſels either of Silver, Pewter, Copper, Iron, Earth, Glaſs; and all by the means of Fire, or of ſome borrow'd heat. Sreight or Upright Diſtillation raiſes up the vapors high into a Veſſel proper to receive them, which muſt be plac'd and luted above that which contains the matters. Theſe vapors thus rais'd are converted into Liquor, and diſtil through the neck of the ſuperior Veſſel, into another ſet below the neck and call'd the Recipient. Oblique or Side-ling Diſtil-

Distillation is made in crooked Vessels, which are call'd Cornutes or Retorts, to which are fitted Recipients bigger or lesser according to the nature of the Spirits which are to be drawn forth. These Vessels were invented for the distillation of ponderous Spirits, as those of Nitre, Salt, Vitriol, *&c.* as also for the distillation of other Spirits less weighty, as of Oyls and volatile Salts, which will not so commodiously ascend by an upright Distillation: such are the Spirits and Oyls of Woods; the Spirits, the Oyls, the volatile Salts of Vipers, Harts-horn, Ivory and many other parts of Animals; as also of certain Plants that abound in Salts and volatile Oyls; and likewise of the Spirits of Tartar, Wax, Amber, and many others. Distillation by descent is made by the putting the fire round about, and at the top of the Vessel, which contains the Substances to be distill'd, and whose orifice is below.

This fire acting upon the substances within, by degrees separates the liquid parts from the gross and terrestrial, and constrains them to descend and distil into the Vessel plac'd immediately below, and luted with the Superiour; there being however between the two Orifices of the two Vessels a little thin plate pierced through with several holes, to hinder the grosser substances from falling into the Recipient, and to give the Liquors passage, to fall into the lower Vessel. The use thereof is particularly, for thick matters, especially Wood. Though this Distillation may serve for thinner Substances; of which you will find examples in my Chymical Preparations.

There is also a sort of Distillation by descent, which is called *per Deliquium*, or by *Draining*, which is only the Resolution of Salts into Liquor, and which is more Natural then Artificial. The distilling of a Vine, cut in the Spring, may be also called Distillation: also Oyl of *Petrol*, or *Naphte*, which distils from the Rocks, and the like. Hither we also refer the Natural Balsom, and other liquids that distil from Plants of themselves, or by Incision: As Turpentines, that trickle from divers Trees, Opium from Poppy, and Scammony from its Plant.

* For in this place it must come from *Deliquo*, and not *Deliqueo*.

CHAP. XLII.

Of Rectification.

Rectification is a new purification and exaltation of the most essential part of the mixt Body, which was formerly separated by Distillation, or otherwise. It is in use for Waters, for Oyls, for Spirits and Salts, as well fix'd as volatile, distill'd or sublim'd. It is also us'd for dry Substances, as also for Tinctures. Rectification is properly a Distillation, or new Sublimation of that which had been already distill'd or sublimated; and by that means a new separation of the aquosities, terrestreities, or other impurities, which are found intermix'd in the first Distillation or Sublimation. You may repeat Rectification so often, till the matter intended to be rectify'd have attain'd its utmost purity. The volatile Salts rise first of all in their Rectification; the Spirits and volatile Oyls follow: the Flegm appears next, or else it remains at the bottom of the Vessel with the thick Oyl and terrestreities. The ethereal spirit of Wine and Turpentine ascend first in Rectification: as it happens also to several other spiritful Waters. The Flegm follows the spirit of Wine, if you continue the fire: if not, it remains at the bottom of the Vessel, The ethereal Spirit of Turpentine, is attended by the unctuous Substances, the first whereof are less thick and less-colour'd than the latter: but the rosinie and thick part lies at the bottom of the Vessel. The watry part of the Spirits of Salt, Vitriol and Sulphur, ascend first in their Rectification; it is follow'd by the Spirits, if the fire be increas'd and continued; if not, the Spirits remain at the bottom of the Vessel. The Oyls ascend among their Spirits or Liquors, which were added to them to hinder their *Empyreuma*, or being scorch'd by the fire during their Rectification. Tinctures are rectify'd by Circulation and Filtration. Fix'd Salts are rectify'd by Calcination, Dissolution, Filtration and Coagulation. You may also mingle among them some small quantity of Sulphur, and burn it in calcining them, if you would cleanse them well from their superfluous moisture, which causes their dissolution; and in keeping them, makes them subject to dissolve into Liquor. As many times it happens to the Salts of Plants, which were not calcinated with Sulphur. *Regulus*'s are rectify'd by repeated Fusions, and additions of some little quantity of Salt-Peter. Perfect Metals are rectify'd by the Coppel, by Antimony, by Sublimate, by the Inquart, and by other ways, *&c.*

CHAP.

CHAP. XLIII.

Of Extraction, Evaporation, and Exhalation.

Extraction is a separation of the more pure and most essential parts of Medicaments from the gross and terrestrial, by the means of some proper *Menstruum*. Dissolution, or at least the Addition of some other Liquor, Digestion and Filtration are almost inseparable from Extraction, This operation is well made use of for Tinctures, Essences, Balsoms, and several other liquid Preparations; but chiefly for those that are call'd Extracts: which are of a consistence solid enough to be made into Bolus's and Pills. Such are the extracts of Rhubarb, Senna, Coloquinth, Ellebore, Aloes, and the like, which are begun by the extraction which is made of their Tincture; and finish'd either by the volatile part of the *Menstruum*, by distillation, if it be worth while, or by evaporating the superfluous moistures over a gentle fire, or in the Sun, or in Horsedung. Extracts also of the Juice of green Plants, is made without any other addition of forreign Liquor. For it is enough to purifie those Juices by Filtration or otherwise, and to evaporate them over a gentle fire, till they come to their necessary consistency. Such are the Extracts of Wormwood, Carduus, Centaurie, Spurge, *&c.*

Evaporation is the elevation and dissipation of the superfluous humidity which is to be found in any Medicament. It is usually made by the means of Fire, though sometimes we also make use of the heat of the Sun; it is very often made use of in several Galenic and Chymical Preparations.

Exhalation is only practis'd upon drie things, to raise and dissipate the most volatile parts; it is made by the means of heat lesser or greater, acccording to the various Substance of the Medicaments. It is of use in several *Galenical* and *Chymical* Preparations.

CHAP. XLIV.

Of { *Liquefaction, Melting,* } *and* { *Coagulation, Curdling.* }

Liquefaction or Melting is practis'd upon Wax, Suets, Greases, Rosins, Gums, Butter, Oyntments, Emplasters, Ice, and all Substances that may be coagulated by the cold, and easily melted by heat. Metals, Metallics, and several Minerals are well coagulated by cold, and may be turn'd into Liquor by the heat of fire: But because this cannot usually be done but by a violent heat, therefore that Operation is call'd Fusion, and not Liquefaction.

Coagulation is oppos'd to Liquefaction and Fusion. And therefore it is call'd the Alteration of a liquid matter into a solid, by the privation of heat or the separation of moisture: as when the fix'd Salts have been dissolv'd in some liquor, and we evaporate the moisture over the fire, then they remain drie and coagulated. The same thing may befal them after they have suffer'd Fusion. It happ'ns also to Metals, and other Minerals that may be run down, as Sulphur, Alum, Antimony, Nitre, Vitriol and many others, which run with the fire and coagulate in the cold. There are also Salts which are call'd Essential, which being melted in hot liquors, coagulate in the cold, as that of Carduus. We see also several dissolutions of Metals, and of several other Minerals made by strong Waters, which were very liquid while they stood upon the fire; but soon coagulated in the cold, notwithstanding the moisture which accompanys them. I pass over the Coagulation of Milk, and that which may be made by the conjunction of acid Spirits with volatile, whereof I shall shew examples in my *Chymical* Preparations.

CHAP. XLV.

Of Fixation, Congelation, and Chryſtallization.

Fixation is oppoſite to Volatilization, becauſe it fixes and ſtops that which was of a volatile nature, and renders it altogether durable in the fire, or elſe able to withſtand its force for a long time. And here we muſt obſerve that Acids are the moſt proper principal means which we can make uſe of to fix Volatiles. Which I do not believe happ'ns through any antipathy, or contrariety of Subſtance that is between them, as many Philoſophers are of opinion: for if that were true, they would certainly deſtroy one another, which never falls out. But my ſentiment is this, That in regard of the great ſympathy and inclination which they have, ſtreightly to unite with their like parts, that is the cauſe that they joyn with ſo much ſwiftneſs, and with a kind of violence; and being once united, they are not parted but with great difficulty, and only when they meet with a Subſtance which more agrees with their Nature. On the other ſide their difficulty to unite proceeds from a certain diſpoſition of the figures of their parts, which render them incapable to embody and compoſe a ſolid maſs together, without making an aſſault one upon another. For though Acids and Volatiles ſeem to have chang'd their qualities in being mix'd and confounded one within another, though their activity be different, when they can act ſeparately; yet they preſerve their Nature and their firſt faculty, and fail not to demonſtrate the truth thereof, when they have been frequently ſeparated. Which may be done with mixing Salt Tartar, or any other fix'd Salt with them. For the acids are more enclin'd to unite to the fix'd Salts, then the volatile. So that joyning very cloſe to the fix'd and adhering but very ſlightly to the volatile, they ſuffer the volatiles to be rais'd by the fire: and theſe volatiles are obſerv'd to have the ſame penetration, which they had before they were joyn'd and mingl'd with the acids: and the ſame acids may be ſtill conſtrain'd to quit thoſe fix'd Salts, when you increaſe the quantity of the latter, and that the former find themſelves too ſtrongly attacqu'd. For the fix'd Salts being in a condition of themſelves to reſiſt the violence of the fire, without the concurrence of acids, could never hinder the latter from quitting them, when they are no longer able to reſiſt the fire, but that they muſt be rais'd and carried away with the acidity and force which they had before they were joyn'd together.

Congelation approaches very near to Coagulation. It happ'ns that ſeveral liquors, and ſeveral Subſtances liquefy'd by heat, congeal in the cold. Such are the Decoctions of ſeveral Meats and Fiſh, as alſo of Serpents, eſpecially of Vipers, the Decoctions of Harts-horn and Elephants-teeth raſp'd, and ſeveral others; as alſo the Juices and Decoctions of ſeveral acid Fruits mingl'd and boyl'd with Sugar: among the reſt thoſe of Goosberries, Verjuice, Cherries and the like; to all which things they are wont to give the Name of Gellies. We may alſo rank under the Name of Congelations, Water congeal'd by the cold, Suets, Greaſes melted before the fire, and afterwards congeal'd; as alſo Wax, Roſines, Oyl of Nut-megs, and ſeveral others eaſily melted at the fire, which always congeal in the cold; though they may be reckon'd alſo for Coagulations.

Chryſtallization is a ſort of Congelation which happ'ns to Salts, as well eſſential, fix'd and volatile, as alſo to thoſe which are mix'd with acids; when being ſeparated from a good part of their moiſture, you let them reſt in a coole place there to chryſtallize; and then to be tak'n out and dry'd when you have pour'd out by Inclination the liquor that ſwims at the top, which is not chryſtalliz'd. This Chryſtallization happ'ns to Cremor Tartar, to the eſſential Salts of divers Plants, to Nitre variouſly prepar'd, to Vitriols diſſolv'd, filter'd and evaporated to the very Pellicula or thin skin; and to ſeveral Minerals diſſolv'd by corroſives. It may alſo happ'n to all ſorts of purify'd Salts, ſeparated from the greateſt part of their moiſture, in which they had been diſſolv'd. We call the ſmall skin or Pellicula, a kind of thin Film, which appears upon the ſuperficies of the Salts, diſſolv'd in Water, when you have evaporated the moiſture over the fire, and that the greateſt part is conſum'd.

CHAP. XLVI.

Of Spiritualization, and Corporification.

Spiritualization is the conversion of the parts of a solid body into Spirit. It is particularly attributed to Salts, of which almost all the parts are converted into Spirit by Distillation. Such are Bay-salt, Nitre, Vitriol, Alum, *&c.* Several other Medicaments are to be spiritualiz'd, especially Juices, and fermented Liquors, which render their Spirits volatile and combustible, but not acid, as are those which we draw from Salts.

Corporification restores to Spirits the same body, or at least a body very like to that which they had before their Spiritualization. For Example, The Spirit of Nitre united with Salt of Tartar, or with its own proper fix'd Salt, and set to chrystallize, resumes its former body. Spirit of Vitriol, after it has devour'd Iron, being dissolv'd in Water, filter'd and evaporated, resumes the form and consistency of Vitriol. There is another sort of *Corporification*, which in embodying of Spirits causes them to take a form quite different from that of their original. For Example, Spirit of Vinegar, having dissolv'd Pearls, Coral, Saturn, *&c.* incorporated, assumes the form of Salt, if you evaporate the superfluous moisture that accompanies it. And this Salt of Vinegar will resume the shape of Spirit by Distillation, abandoning to the bottom of the Vessel the matter with which it was incorporated.

CHAP. XLVII.

Of Reduction, and Mortification.

Reduction is the re-establishment of mixt Bodies, or their parts in their natural Estate. As when the Spirits, united and incorporated with certain Matters, are separated from them and reduced to their former estate by Distillation. Reduction is very much practis'd in Metals: For by that means the Metals which appear destroy'd, by several Corrosions, Calcinations, Sublimations, and Dissolutions are reduc'd to the same condition in which they were, before they had suffer'd any alteration.

Mortification is a change of the exterior form, and sometimes of the consistency of the mixt Body. It may be attributed to Mercury, not only then when being mingl'd and incorporated with Turpentine, or with other oylie Substances, it loses its motion and fluidness; but after it has undergone several Chymical Preparations. It may be also apply'd to Saturn or Lead in divers Preparations. It may be also attributed to Animals or Plants, not only then when motion and growth are tak'n from them with their Lives, but also when their parts are dis-joynted, and that they have chang'd condition and form.

There are practis'd in both the one and the other *Pharmacy* several other manners of preparing, of which you shall be sufficiently inform'd in the following Part of this *Pharmacopœa*, without giving you the trouble of multiplying Descriptions in particular Chapters.

CHAP. XLVIII.

Of Mixture.

NO Man can undertake the Preparation of any Medicin before he know it: No more can any Man practise Mixture before he know Preparation. For all Medicaments are not so simple, so known, so usual, so easie to mixe, as Water and Wine.

Mixture is then the third thing a *Physician* ought to know and put in practice. It is defin'd, an Artificial mixture of divers Medicaments, which an Artist has chos'n and alter'd

alter'd by Preparation; and which he unites together to make a compounded Medicament. And in truth when the Ancients talk'd of Mixture, they chiefly meant that Mixture which is made of ſeveral Medicaments prepar'd to make one Compoſition. As when to make any Electuary the Artiſt chooſes, weighs and orders every drug; beats thoſe things which are to be reduc'd into powder; ſtrains the Pulps; makes the Decoctions, boyles the Sugar or Honey with them to a convenient conſiſtency, then mixes the Pulps and the Powders, and makes the Electuary; and ſo of other compoſitions. But I muſt ſay, That in both the one and the other *Pharmacy* there are continual Mixtures; in regard there are few Preparations that can be made up without Mixture. And though Mixture ſeems eaſie enough, and that it be truly ſo to them that well underſtand all ſorts of Preparations; yet it does not want its difficulties, and requires a great exactneſs in a thouſand things which are to be obſerv'd. As in the ordering of Medicaments that are to be put into one Compoſition; the regard which is to be had to their different Subſtances; the Preparation which is due to them to diſpoſe them for Mixture; the proportions requiſite for Ingredients, to bring them to their juſt conſiſtency, and the form which is intended to be giv'n to the Medicament; the degrees of heat and boyling; the Veſſels and Inſtruments to be made uſe of in Mixture and Boyling: the time and moment neceſſary, and the Veſſels and place where Medicaments are to be ſet up and preſerv'd.

The diverſity of Diſeaſes, their complication, their accidents unfore-ſeen, and the neceſſity at all times of a quick Remedy, have conſtrain'd the *Phyſicians* to invent an infinite variety of Compoſitions. They muſt frame themſelves to the nature and conſtitution of the Patients, and vary the applications of Medicaments, as well ſimple as compound, as occaſion requires, to quick'n the flowneſs and weakneſs of ſome, and repreſs the violence of others. It behoves them to give them various forms and conſiſtencies, to vary the taſte, and to provide for their preſervation, which cannot be done without making uſe of Mixture. So that mixture is not to be ſeparated either from the one or the other *Pharmacy*: for though *Chymiſtrie* does not uſually require either in Preparation, or in the uſe of Medicines, ſuch a numerous quantity of Medicaments to be clapt together as the *Galeniſts* do; yet the Diviſion and the Purification of the parts of Medicament, require a skill and dexterity altogether peculiar, as well for their Mixture as their Union. It behoves the *Chymiſt* to know the diſſimilitude of Subſtances, and how to reduce them to a kind of homogeneouſneſs; to make Elixirs and univerſal Medicines of great vertue, which are beyond the knowledge of *Galenic Pharmacy*: as not being accuſtom'd to practiſe Mixture, but upon Medicaments incumber'd with all the parts of which they are compos'd.

Here I might ſeaſonably dilate upon many cautions to be obſerv'd in the right Mixture and Union of all ſorts of Medicaments: But in regard that in the following part of this *Pharmacopœa* I am oblig'd to ſpeak of the particular mixture of every Compoſition, as alſo of every conſiderable Preparation, as well *Galenic* as *Chymical*; I thought it more convenient to remit the *Reader* thither.

CHAP. XLIX.

Of the Compoſition of Medicaments.

THE Compoſition of Medicaments cannot be accompliſh'd without mixture. But the word *Compoſition* implies ſomething of well-order'd, proportionate and diſpos'd to produce thoſe effects which are requir'd upon occaſion from the union of ſeveral Medicaments, tending together to one or more purpoſes. I will not repeat here the reaſons for which the Compoſition of Medicaments was invented. It ſhall ſuffice me to take notice, That beſides the great number of Compoſitions which have heretofore been made uſe of, the *Phyſicians* are at liberty every day to invent more; and that in ſome there may be a greater, in others a leſſer number of Medicaments. I muſt alſo needs ſay that Preſervation is one of the chief ends of Compoſition; nevertheleſs many compounded Remedies us'd every day, cannot be kept long; and therefore they are never to be prepar'd, but onely when there's occaſion to uſe them.

It is not my reſolution to inſiſt in general upon all the compounded Remedies which the Ancients have made uſe of; and of which they have left ſeveral preſidents. It will

be enough for me to ſpeak of thoſe, which are in practice at this day. To which intent I will divide all compounded Remedies into internal and external. The internal are Juleps, Apozems, Emulſions, Almonds milks and creams, Reſtoratives Purgative potions, Altering-phyſick, Mixtures, Gargariſms, Ptiſans, divers Decoctions, Bolus's, Clyſters, Suppoſitories, Peſſaries, Injections, Wines, Vinegars, and divers Juices, which may be alſo outwardly apply'd, Robbes, Honeys compounded, Oxymels, Syrups, Loches, Lozenges, Condites, Gellies, Conſerves, Electuaries, Hiera's, Opiats, Confections, Antidotes, Tablets, Pills, Powders, Diſtill'd-waters ſimple and compound, Feces, Extracts, Roſins, Salts fixt, volatile and eſſential, Chryſtals, Flowers, Magiſteries, Saffrons, Oyls diſtill'd and preſs'd; Tinctures, Elixirs, Eſſences, Balſoms, Panacea's, Lime, Stones, Glaſſes, Regulus's, Sulphurs, Sublimates, Precipitates, *&c.* Remedies external compounded, are Baths, Half-baths as well liquid as by ſteam, Lotions, Embrochations, Fermentations, Bags and Caps quilted with Cephalic-powders, Frontlets, Sinapiſms, Veſicatories, Depilatories, or Medicines to take away the Hair, Cataplaſms, Epithemes liquid and ſolid; Suffumigations, Pomatums, Grains and Sweet Candles, Cauſtic-ſtones, Mucilages, ſeveral Balſoms, ſeveral Oyls, as well by infuſion as expreſſion and diſtillation; Liniments, Oyntments, Sear-cloths, Emplaſters, Paſtes for the Hands, Wax'd-linnen-cloths, Sparadraps, or Linnen-cloths dipt in melted-ſalves, certain Flowers, certain Magiſteries, certain Limes, and certain compos'd ſtones, of all which I ſhall ſpeak in their proper place.

CHAP. L.

Of Fire, and its degrees.

IT was not without great reaſon that Fire has been eſteem'd at all times the moſt noble of all the Elements. In regard it is the principal agent of Nature and of Art in the Production of all things: it foments, it nouriſhes them, and gives them growth: it comforts by its light, and penetrates by its ſubtlety the moſt compact of Subſtances. So that I cannot imagine, by what motive, Perſons that have rendred themſelves famous as well by their Chymical Operations as Writings, and who never could have any reaſon to miſ-doubt the utility of Fire, ſhould nevertheleſs go about to blot it out of the number of the Elements; and inſtead of making it the author of any conſiderable production, ſhould give it the Name of Corrupter and Deſtroyer. For though I make no queſtion, but that Fire being kindl'd in wood or any other combuſtible, matter and meeting with a continuity of ſubſtance upon which it can exerciſe its activity, will deſtroy, and continue that deſtruction, till it meet with no farther matter to act upon: yet all the World muſt of neceſſity be convinc'd, That beſides the continual neceſſity we have of Fire, as well in the one as the other *Pharmacy*, as alſo for the ſupport of Life, it is in our power to augment or abate its force at our pleaſure; either by laying on or taking off the wood or coals, or by opening or cloſing the Pipes that let in the Air and quick'n the Fire. Neither it is poſſible for me but to commend and ſeek the aſſiſtance of Fire in my Profeſſion; and I am alſo forc'd to confeſs that without the aſſiſtance thereof, I had never attain'd any ſolid knowledge; and that what I have acquir'd would be of no uſe to me in the moſt part of my Operations, ſhould I want Fire to begin, continue or carry them to perfection.

Under the Name of Fire, I underſtand not only the ordinary Fire lighted, and acting upon wood, coals, or any other combuſtible matters; but all Heat that produces action approaching next to that of Fire. And therefore I ſhall divide Fire or Heat into Natural or Artificial. Natural Fire is eſteem'd to be that which comes from the Rays of the Sun. Artificial, is that which depends upon the skill of Men; according to the variety and quantity of the matter combuſtible with which they furniſh it, and the more or leſs Air which they afford it. The one and the other *Pharmacy* make uſe of the Natural heat of the beams of the Sun in ſeveral reſpects: but they more frequently have recourſe, and indeed at all times to Artificial Fire, which is able to do many things beyond the Natural heat of the Sun.

It is not neceſſary for me here to dilate upon the heat of the Sun, which we may ſeek and find to be more or leſs exceſſive, according to the Climates and Seaſons, and the various occaſions of it; it being alſo to be augmented and re-inforc'd by reflexion and

and repercuſſion, by the help of a Burning-mirror. I will only inſiſt upon Artificial heat, and the ſeveral degrees of it; of which we muſt acknowledge two in general, one for Digeſtion, and the other for Separation.

Digeſtion makes uſe of ſeveral fires, of which the moſt ſimple and neareſt to Natural heat, is that of Horſe-dung, which may be more or leſs exceſſive, according to the quantity of the Dung, the time when the Dung-hill was made, and the depth of the Veſſel's being plac'd in it. For certain it is, that a man cannot put his hand in the midſt of a great Dung-hill of Horſe-dung, if it have had time to rip'n; nor endure a rod of Iron that has been buried but a-while in ſuch a muck-hill. The heat of Horſe-dung is alſo call'd The heat of the Horſes Belly.

The Fire of the Air heated by an ordinary fire kindl'd under a Veſſel of Iron or Earth fit to reſiſt fire, and clos'd in a cloſe Furnace, capable of receiving the Veſſel which contains the matters, is accounted a moderate Fire.

The fire of a Lamp, is a fire alſo as moderate as equal; and yet it may be encreas'd or diminiſh'd, according to the bigneſs and quantity of wicks which you light; as alſo according as the Veſſels are to be more or leſs heated. The fire of Lamps is very much us'd by thoſe that ſeek after the univerſal Medicine; and for ſeveral Operations that require continuance of time and an equal fire, either for Digeſtions or Fixations.

The fire of the ſteam of hot water is a very moderate heat, but it cannot be continued ſo equal as that of Dung, the Lamp, or the heated Air. You may alſo increaſe the heat, by cauſing the water to boil. The uſe of it is only for Operations that require not the long continuance of a fire.

The fire of *Balneum Mariæ*, call'd the Sea-bath, is made uſe of by plunging the Veſſel that contains the matters into the hot water, as into a Bath. It is uſeful for Tinctures, Circulations, Digeſtions, and Diſtillations. It is a little more hot then the evaporating Bath, of which I have already ſpoken. It may be ſo far made uſe of, as to make the water boil.

The fire of Cinders, improperly call'd the Cinder-bath, is ſomewhat hotter then all the former, if it be made as hot as it may be. The Cuſtom is to make uſe of Wood-aſhes ſifted through a coarſe Sieve, to the end they may be put into a Capſula of Iron, or of Earth able to reſiſt the fire; and then to place the Capſula upon a Furnace proportionable, and to let down the Veſſel containing the Medicaments into the Cinders or Aſhes, ſo that there remain a good Thumbs-breadth between the bottom of the Cheſt, and the bottom of the Veſſel; and that the Aſhes may be heaped up round about the Veſſel to the height of the Medicaments. The Veſſel may be of Silver, Copper tinn'd within, Earth or Glaſs. The fire is lighted under the Capſula of Aſhes, to heat them by a little and a little, and is continued or increaſed as occaſion requires, either for digeſtion or diſtilling.

The fire of Sand, which bears alſo the name of a Bath, may be more powerful then that of Aſhes. Whence it comes to paſs, that it is call'd the fire of Separation, yet it may be more or leſs hot, as you make uſe of more or leſs fire; or according to the different weight and bigneſs of the Gravel; ſo that if you moderate the heat, it may ſerve in the place of Aſhes.

The fire of the Filings of Iron or Steel, bears alſo improperly the name of a Bath. It's heat may be much more increaſed then that of Sand; but it is not much us'd.

The bare or immediate fire may afford much more heat then all the precedent fires. It is ſo call'd, becauſe the fire immediately gives its heat to the Veſſel, which contains the Matters; as alſo to the matters themſelves, if they may be expos'd, to the fire, without being put into any Veſſel. This fire is very much us'd in both Pharmacies, and chiefly for ſeveral Decoctions and Diſtillations; as alſo in Kitchins to dreſs Victuals, for which reaſons it is accounted the moſt common and chiefeſt of all.

The fire call'd the fire of the Wheel; as when the fire is put into the Crucible, or in another proper Veſſel; and then the fire is kindled round about the Veſſel, making as it were a Wheel of fire, from whence it had its Name. This Wheel of fire ought to be at a ſufficient diſtance, at firſt, from the Veſſel, to heat it by degrees, then inſenſibly put a little nearer, with an equal fire round about, and then laid all together cloſe to the Veſſel; where it may be continued, or increas'd as occaſion requires.

There is alſo another ſort of Naked fire, called the fire of Suppreſſion, which in degree of heat is not much unlike that of the Wheel; and which is made uſe of ſometimes the better to fix the ſubſtances, and ſometimes to ſeparate ſome ſubſtance, which it cauſes to iſſue forth by the ſide, or to deſcend to the bottom. The Veſſel is heated by a little and a little, environing it at firſt, and then covering it altogether with

kindl'd Coals, encreasing or abating the fire, for so long time, and to such a degree, as shall be requisite to perfect the Operation. Sometimes the fire of Suppression is used at the end of Distillations made through the Cornute, chiefly of those that are made in the Sand-Bath; They are also at other times made use of in the middle of Distillations, the better to draw forth the Spiritful Substances, or Oyl, which resist the fire that is under the Vessel.

The fourth, Naked fire, is that of the close Reverberatory, which is done by placing the Retort that contains the Substances, in a Furnace fit for the purpose, over a fire small at the beginning, then continu'd and increas'd at length to a great violence. The fire of close Reverberation, is us'd in the Distillation of several Spirits, especially those that are corrosive: It is made use of for the Distillations of several Oyls, and Salts, Volatile; who have no necessity of a fire so long, nor so great. This fire is call'd the fire of Reverberation, because it does not only strike upon the Vessel immediately, but because it reflects and strikes the heat back again from the top, and round about. There is also an open fire of Reverberation, which is made in a furnace that hath no covering.

The fifth fire, is that which they call the fire of Flame, or of Fusion: This is a fire more violent then any spoken of before: and which not only serves for the Fusion of several Metals, half-Metals, and Metallics, but also for the Calcination of them, and of several Stones.

There is a sixth fire, which is the fire of great Glass-houses, which is appointed to vitrifie the Ashes of Plants, Flints, and sandy Substances. This fire is more powerful then all the rest, because of the greatness, and thickness of the Furnace, and the quantity of Wood with which it is continually supply'd. It may serve to Reverberate and Calcine divers Substances. All these fires, though very much differing the one from the other, may have every one in particular their several degrees by themselves: So that every fire may be made variously great or hot, and yet not vary from its kind. We also assign to violent heats, especially to that of Reverberation, four degrees, of which the first is only made use of to heat the Vessels by degrees, and the Substances therein contained: The second is, to heat them a little more, and to make them almost red-hot: The third is, to make them altogether red-hot: The fourth, to maintain the Vessels and Substances in the same condition, as also to make them endure a continu'd fire, as violent as it can possibly be by Reverberation.

The Activity of several fires, of which Chymistry makes use to perfect her Operations, would be weak enough without the assistance of the Air, which we may call as it were the soul of fire, and the grand cause of divers effects, which we expect from it; in regard, that in an eqnal quantity of Coal, or other combustible matter, the fire will be more or less hot, as there is more or less Air to quicken it. Whence it comes to pass, that we must observe the necessary rules for the making of Furnaces; and together with the consideration of the distances of heighth and breadth, not forget in-lets for the Air, and where to let it out again: so to make use of it as occasion shall serve, as well to encrease the Heat by opening them, as to abate the Heat by shutting them.

CHAP. LI.

Of Furnaces.

A Furnace is call'd a close place, wherein the Apothecary kindles, proportions and orders his fire, for all sorts of Compositions, or Preparations, both Chymical and Galenick. Furnaces have been invented for the conveniency of the Artist; that being master of his fire, he might be able, either to increase or abate, and use it effectually upon all sorts of Substances, as occasion requires.

The Structure of Furnaces, is very various, because it depends as much upon the Nature of the Substances, and the Operation there to be undertaken, as upon the Genius and Skill of the Artist, who ought to understand as well how to invent them, as to build them.

The matter whereof Furnaces are composed and built, is very various; and as to that, there is as much regard to be had to their bigness, as to the place and use to which they

they are appointed. Thoſe in great Glaſs-houſes are built of a thick ſtrong Stone, able to reſiſt fire, as well becauſe of their extraordinary bigneſs, as becauſe it is requir'd that they ſhould laſt long. We alſo cut and fit one, two, or more of thoſe thick Stones, and of the ſame Nature, to make leſſer Furnaces, appointed for other uſes. Furnaces more uſed, are generally compoſed of Brick, ſometimes ſquared and long, ſometimes moulded into portions of a Circle, whereof ſome make a fourth, a ſixteenth, and ſome an eighth. Theſe Bricks are ſometimes laid one upon another, without binding them with any Morter: eſpecially when the Operation is in haſte, or requires no great caution.

Theſe Furnaces may be raiſed and taken down, according to a Man's pleaſure. But generally they build their Furnaces with Brick, laid and bound with ſeveral ſorts of Mortar, according to the diverſity of the Earth, and the violence, or remiſsneſs of the heat which the Furnace is to indure.

There are alſo other Furnaces call'd Portative-furnaces, becauſe they may be carry'd and plac'd where a Man pleaſes; which are oft-times all of one piece, but moſt frequently of two, three or four, joyn'd and plac'd one above another; and and may be alſo diſ-joyn'd as occaſion requires. All theſe Portable furnaces, as well thoſe that are of ſeveral, as thoſe that are all of one piece, have their place for the aſhes, their Grate, their Hearth, their Doors, their Duomo's, their Regiſters, and all their other parts, like the Furnaces which are made of Brick. The materials of theſe Furnaces are uſually a fat Earth, pounded together with the powder of pots made of Potters-earth, and Sand proportionably mix'd together, with Water ſufficient to bring them to a paſte. They are afterwards bak'd in a Potter's Furnace among other earth'n Pots.

All Furnaces are either op'n or cover'd: The op'n Furnaces have no Coverings, whereas they that are cover'd have their hollow Coverings like Domo's, that cover the Subſtances therein contain'd, and prevent diſſipation. The moſt part of *Galenic* Preparations or Compoſitions are made in open Furnaces, though the ſame Furnaces may ſerve for ſeveral Chymical Preparations. The round ſhape is not to be preferr'd before the ſquare as to the outward form; in regard there is little difference of the one from the other, as to the *action* of the Fire; however the circular figure is to be deſir'd as much as poſſible for the interior part of the Furnace: becauſe the heat acts therein with more liberty, and becauſe therein it imparts it ſelf more equally then in any other figure. Obſerve by the way, That the thickneſs of Furnaces is of great advantage to preſerve the heat of the fire, and reſiſt the coldneſs of the Air, which uſually diſſipates a good part of the heat of Furnaces that are too thin. The ordering of the Air is alſo as neceſſary as that of the Wood or Coal, in the government of the fire; in regard, as I ſaid before, the letting-in or keeping-out the Air, increaſes or abates its force. Whence it comes to paſs that in the diſtances and proportions, which are to be obſerv'd in building Furnaces, to give the fire that air which is uſually neceſſary, after you have made convenient doors in thoſe parts of the Furnaces where the air may eaſily get out and in, you muſt have ſtopples of the ſame, to ſtop thoſe out-lets, when you would moderate the power of the fire, or to op'n them when you would increaſe it. Which may be better apprehended in the following Examples; and firſt, in the deſcription of an op'n Furnace, very convenient for daily uſe, and built in that manner that you ſhall find three different ſpaces; that is to ſay, The place for the aſhes, that for the Hearth, and that whereon to place the Veſſel which contains the Subſtances.

This Furnace muſt be made of Brick bound together with one ſort of lute; which is uſually compos'd of fat Earth, Sand, the ſcum of melted Iron, Hair and Horſe-dung kneaded and wrought together with Water. It muſt have its place for the Cinders, its Grate, its Hearth, its bars of Iron, the place for the Veſſel, its Doors and Regiſters. You may alſo afford it a hollow round Cover, and a fourth place, which may ſerve for the fire of Reverberation. This Furnace is uſually ſquare, and ought to be ſeven and twenty thumbs-breadth or inches high, and above twenty broad for every ſquare; ſo that the interior ſpace muſt be twelve inches ſquare. The place for the Cinders muſt be eight inches high, upon which the Grate ought to be plac'd from ſide to ſide a-croſs, taking up about an inch of the thickneſs of the height of the Furnace. The Grate muſt be made of ſquare Iron-bars ten or twelve **lignes* thick; they are to be made of a length proportionable, and flatted at the ends where they are to be fix'd. But this flatting ought to be irregular, and only upon the two Angles, ſo that when the bars ſhall be plac'd, one of their Angles may turn directly upwards, and the other Angle tend in a ſtreight

*A *Ligne* is the third part of a Barley-corn, or the twelfth part of an Inch.

ſtreight line to the bottom; and the other Angles face the reſembling Angles of the other bars that are collateral with them. There ought to be but the diſtance of four or five *lignes* between bar and bar, which is wide enough for the air to enter that is requiſite to burn the coal; and cloſe enough to keep the coal from running through the Grates. In the Cinder-place muſt be left a door about the breadth of an ordinary Brick as high as the Cinder-place in the front of the Furnace. To this door muſt be faſten'd a plate of iron about five or ſix lignes thick, about three inches broad, and eight inches long, which is to be inſtead of a Lintel, upon which a Brick muſt be laid. There you muſt go on and build the Furnace round about, leaving a door for the hearth as large as that for the under-room. Theſe doors are to be directly one above another. That of the hearth ought to be ſix or ſeven inches high: and to that muſt be faſten'd a plate of Iron as to the door of the Cinder-place, which plate muſt be cover'd with a good Brick. About this height you muſt leave two holes, each ſo big as to put a good large wall-nut through them. Theſe holes muſt be directly oppoſite one to the other, and every one in the middle of the ſides of the Furnace. Theſe holes muſt alſo be made quite thorough, to hold a bar of Iron, if need be, toſuſtain a Veſſel. Then raiſe the building of the Furnace four inches above thoſe holes, which is a height ſufficient for any ordinary Furnace, and will ſerve for all manner of Decoctions. But if you deſign it for uſes of more conſequence, you muſt continue to build up the Furnace, till it be rais'd eighteen inches above the Grate, ſo that there may be allow'd between eight and nine inches for the height of the hearth, and that the reſt may be to place the Veſſel that contains the Subſtances. Then you muſt fill up the interior Angles of the Furnace with good lute mixt with pieces of Brick, ſo that the inſide may be like a circle. But you muſt leave in the inſide of every Angle an op'n hole wide enough to put your finger thorough. Theſe holes muſt be hollow'd towards the hearth, to let in the air which is neceſſary to feed the fire. They are call'd by the name of *Regiſters*, becauſe they ſerve to govern the fire. They muſt have their ſtopples made of the ſame materials as the Portable-furnace, to ſtop them when you would abate the force of the fire. The Hearth-place alſo ought to be built in ſuch manner, that it may the more and more contract it ſelf the nearer it comes to the bottom; ſo that the ſame bottom may not be above ſeven or eight inches in diameter: and that as well to ſpare coal, as to cauſe the fire to extend it ſelf towards the middle of the hearth. The inſide of the Furnace inſenſibly ought to enlarge it ſelf at the top, for the conveniency of larger Veſſels, of which you may have oft'n occaſion to make uſe. Theſe furnaces may be convenient for thoſe Diſtillations that have need of a Reverberating-fire, by making on the one ſide a hollow notch to put in the neck of the Retort, and covering the furnace with a proportionable Duomo, that has a hole in the middle; which will ſerve as well as the four Regiſters, which will lie hid under the baſis of the Duomo. By this means you may have a Cover'd-furnace, which may be of uſe for divers ſorts of Meltings and Calcinations, if you only make two or three doors to the Cinder-place; for the air that enters in at thoſe holes will very much enliv'n the force of the fire. This thought engages me to give you the deſcription of three Wind-furnaces, by which the Curious may find wherewith to ſatisfie themſelves, and be able to make thoſe fuſions of Metal, which *Chymical Pharmacy* may have need of.

Draw a Plat-form, and build a ſquare of twenty inches in diameter, leave in the middle of every front of the ſquare an overture of four inches broad: Which four overtures ſhall be four doors; then build up with Bricks all the four fronts of the ſquare, reſerving ſtill the thickneſs of the doors: the thickneſs of the walls ſhall be the breadth of the Bricks, that is to ſay, about four inches; then raiſe the building two foot higher: but as you build, leave in every corner of the furnace a ſtopping-hole, beginning at the bottom, and tending upward toward the corner which is diametrically oppoſite. This hole ought to begin about the fifth inch of the building, and aſcend within two inches of the middle of the Grate. Theſe four holes muſt be ſtrengthen'd every one with a Pipe of Iron about two *lignes* thick, and three foot long, made like a ſtraight Trumpet; about four inches wide at the exterior mouth, which muſt be turn'd downwards, but contracting and tapering to the upper part, till the hole be no bigger then to put a Man's finger in. Theſe four Pipes are to be ſoder'd with Copper, and to be fix'd as you raiſe the furnace. Upon this Building rais'd two foot, you ſhall lay your flat bars of Iron, ſix or eight *lignes* thick: and four inches broad, which ſhall bind the four walls of the furnace. You muſt put the Grate upon two of theſe bars of Iron oppoſite the one to the other, the bars whereof ſhall be of the bigneſs, ſhape, and flatted at the two ends, like thoſe deſcrib'd for the former

Furnace,

furnace, and are to be rang'd and fix'd in the ſame manner. Then continue the building above the bars of the Grate, and above the plates of Iron, as well as over all the reſt, without leaving any new door; and raiſe it ten inches high, which will be room ſufficient for the Hearth, and whereon to place the ſubſtances which you intend to calcine or melt. Then fill the internal Angles of the Hearth-place with Lute, well-mix'd with pieces of Brick, ſo that the Internal Figure may be circular, and then taper again by a little and little till it come to the door, as I have already ſaid of the preceding Furnace. You muſt cauſe a Potter to make a Duomo Cover, all of one piece, the bottom whereof muſt reſt upon the inner brims of the Superiour part of the Furnace. This Duomo ought to be about an inch and a half thick, hollowed like a Vault, about ſix inches in height. The Furnace ought to have one door beginning at the bottom, about five inches broad, and four inches and a half high, and a ſtopple of the ſame material as the Duomo, of the ſame thickneſs, with two holes bor'd through it of an equal bigneſs toward the middle, ſomewhat long, and one by the ſide of the other, and ſo made as to receive a ſmall pair of Nippers, to take off, and put on the Stopple as occaſion requires.

The Duomo ought to be open in the middle of the upper part, and the opening ought to be round, about two inches in Diameter, to ſerve inſtead of a *Regiſter*. You may ſet over the opening of the Duomo, one or two Pipes upright, the one upon the other, about five or ſix *Ligne's* thick, their hollowneſs being proportionable to the Overture of the Duomo, about three foot in height. The Coals kindl'd in a Furnace thus order'd, ſhall give a violent heat able to melt or calcine any Minerals, that fire has power over. This furnace will plainly demonſtrate the force of the Air in the operation of fire.

But you ſhall obſerve an effect much more powerful, if you build a Furnace after the following manner. Build a wind-Furnace three foot from a Well, equal in its dimenſions, to that which I have already deſcrib'd, excepting the Pipes at the four Corners, which you may let alone. Provide a Tunnel of white Latten, about two Inches in Diameter, the bottom whereof is to be five or ſix times as wide as the reſt of the Pipe, to give the more free entrance to the Air. This Pipe ought to be very long, ſo that it may reach from about half a foot above the Superficies of the water of the Well, to that part of the floor upon which the Furnace is built. The upper end of the Pipe muſt be crooked, and ſomewhat Tapering, ſo that it may enter and fix it ſelf in a new Pipe, which is to be of ordinary Iron well ſtrengthen'd, and Tapering toward the head, the hole whereof muſt be no bigger then to admit the end of your Finger. This laſt Pipe muſt paſs through a hole made on purpoſe under the border of the Well, level with the floor, the great hole or end being ſtrongly riveted into the leſſer end of the great Pipe of white Latten. It muſt be of a ſufficient length, and retorted in ſuch manner, that it may aſcend inſenſibly, with its point ready to paſs through a hole underneath one of the bars of Iron, which are placed above the doors of the Furnace, and which reaches toward the bottom of the Crucible containing the ſubſtances; which muſt be plac'd upon a round of Potters Earth, plac'd in the middle of the Grate. You muſt alſo make a hole, though never ſo ſmall, in the Wall of the Furnaces, oppoſite to that where the Pipe enters: But it muſt be higher then the firſt, ſo that it may appear in that part, whither the wind of the Funnel ſhall be carry'd. This Engine produces an effect altogether extraordinary. For in the midſt of that great noiſe which the encloſed air makes, in paſſing and repaſſing through the Funnels, you ſhall perform in leſs time, and with leſs Coals, what you ſhould hardly accompliſh with a great Fire, without the help of this, or ſome ſuch like piece of Art,

The third wind-Furnace is leſs troubleſome then the preceding: and it is to be received with ſo much the more applauſe, conſidering the laſt years ſucceſs of that which I built in the Chymical Laboratory in the Royal Garden.

This Furnace muſt be ſquare, two foot high, and two foot in Diameter: It muſt have one door to its Cinder-place, in the middle of the front-Wall, cloſe to the floor, which ſerves for the Baſis of the Furnace. This door muſt be eight inches in height, and eight inches in bredth. The Walls of the Furnace, ought to be about ſeven inches and a half thick, ſo that there may remain a void ſquare place in the middle about nine inches in Diameter. They muſt be built of Brick, and good Lute: and when they ſhall be rais'd equally to the height of the door, you muſt cover the top with two good plates of Iron; then in the inner part of the Furnace, next to the Walls lay four ſquare Bricks, every one big enough to cover all the one ſide, about an inch thick: thus you ſhall fix them ſtreight to the Walls with the Lute of the Building; and ſo order it, that the

inſide

inſide of the Furnace may be ſquare, and the four Bricks ſo levell'd, may be able to ſuſtain a frame of Iron, fit to bear ſuch ſubſtances as are to be expos'd to the fire in the Furnace. This frame is to be an inch thick, about nine inches in Diameter, and compos'd of a ſquare joyn'd together with ſoder, or otherwiſe, each Bar whereof ought to be an inch thick, and an inch broad. In this ſquare there muſt be a croſs of Iron, in bredth and thickneſs equal to the Bars; ſo fram'd that it may reſt with the half Iron, upon the ſquare, without exceeding its thickneſs. This ſquare muſt be fix'd upon the level Bricks: but before you fix it, provide a round Copper-pipe, ſoder'd with good ſoder; being about fifteen *Lignes* in Diameter, and about ſix foot long, not comprehending the two ends, which muſt be bent; the uppermoſt of which muſt be ſo large, as only to imbrace cloſely the neck of the bellows, which are to be placed above, and a little upon the one ſide of the Furnace. As for the other end, the lower part of its retorted point ought to taper in that manner, that it may be able to admit no more then your finger. This lower end muſt be an Inch longer then the thickneſs of the Wall of the Furnace, and ſo bent that it may penetrate in a direct Line croſs the ſide-Wall of the Furnace; and that the point not entring above an inch within the inſide of the Furnace, and penetrating one of the four ſquare-Bricks, may only reach within an inch below the Quadrate of Iron, whereof I have ſpok'n. The principal body of the Pipe, ought to run in a Perpendicular Line, along the middle of the ſide of the Furnace: and there to be fix'd with Lute, as far as the height of the Furnace will permit. That which is over and above may remain bare, or elſe be wrapt up with ſome matter proper for its preſervation. The lower end of the Pipe muſt be fix'd in the Wall of the Furnace; ſo that no outward Air may enter from thence into the Furnace.

After you have well fitted the end of the Funnel, and plac'd the Iron-ſquare upon the four ſtreight Bricks, then continue to carry up the building of the four Walls of the Furnace. But take care in the mean time to furniſh the inſide, with ſquare upright tiles, about an inch thick, like to thoſe below, ſo that there may be two rows, each of four tiles ſet one upon another; ſo that the void ſquare of the Furnace, may be in all about ſeven inches in Diameter, and about fifteen inches high above the ſquare of iron. In the mean time, you muſt prepare a ſquare piece of caſt Iron, about eight or ten *lignes* thick, proportionable to the void ſpace of the furnace, and which muſt be notch'd at the Corners, about the bredth of an inch. This ſquare is to bear the Crucibles, and other Veſſels; and the Notches, or Semi-circles, are made to give requiſite entrance to the wind of the Bellows, to quicken the fire of the Hearth.

Sometimes upon this Iron ſquare, they place a round cake of furnace-earth, a good inch thick, to bear the Crucible or veſſel, containing the ſubſtances. You muſt alſo get ready a ſquare of furnace-earth, ſomewhat thicker and larger then that of Iron, without any Semi-circles cut in the corners, to cover the upper part of the opening of the furnace, when the Crucible is plac'd therein, and that you intend to increaſe the fire. At the ſame time you muſt have great double Bellows, like the Goldſmith's, which you muſt place at a height equal to that of the height of the Pipe; to the end you enter and joyn into it, as cloſe as may be, the noſles of your Bellows; and look that there be not the leaſt chink, or cleft for the wind to get out, that is to enter into the Pipe. Theſe Bellows ought to be ſo plac'd, that by means of a cord faſtned at one end to the upper board of both Bellows; and at the other, fix'd to the end of the little beam faſtned above, it may be eaſie, by drawing a cord fix'd to the other end, to raiſe and let fall the Bellows-boards, which riſing and falling ſucceſſively like an Organ-bellows, keep a continual breath. The wind of theſe Bellows, and the ſtructure of this furnace, the door being well-luted, with a little Coal cauſe a heat much more violent, then a far greater quantity ſhould do in the ordinary furnaces. They that have ſeen the good effects and the little Coal it conſumes, will not blame me for giving you the deſcription and form of it.

The *Athanor* or *Athannor*, is a Furnace that cannot afford heat enough for operations that require a violent fire; but very convenient for thoſe that may be done by a moderate fire. The Name comes from the *Arabians*, who call the Name of an Oven or Furnace *Tannaron*. The *Greeks* have call'd this Furnace Ἀθανάλω, which ſignifies *without trouble*. For which reaſon it is by others call'd *Piger Henricus*, or *Lazie Henry*. Some have giv'n it the Name of the *Philoſophical Furnace*, or the *Furnace of Secrets*. This Furnace is as much us'd, as it is variouſly built not only for its height, breadth, and ſhape of the place which is to contain the coal; but alſo for the ſhape, number and uſe of the Furnaces, which are to be built next the Tower; and which are to be heated by its fire, as alſo for the manner of imparting their heat. The firſt deſign of thoſe that invented the *Athannor*, was, that they might be able to heat with the ſame fire,

fire, and with little trouble ſeveral furnaces at once. Wherein they have ſuceeded very well by means of a high Tower, which they have furniſh'd with a Grate and a Cinder-place, a door and openings neceſſary for the imparting of heat: and having kindl'd the fire upon the Grate, they fill the Tower with Charcoal, cover it at top, and by vertue of the Charcoal which kindles by degrees, and which may well burn with an equal heat for twenty four hours and more, they impart an equal heat at the ſame time to ſeveral Furnaces near the Tower: by means of the openings made upon the ſides of the hearth of the Tower, and thoſe parts which are next the Furnaces. But though their invention have been effectually commodious, yet there was afterwards a kind of Tower invented, the coals whereof fall into the hearths of the furnaces which are plac'd about it, and which contain the Subſtances; which by that means are more vehemently heated, then they would be by a heat that only came ſide-ways, and onely from the hearth of the Tower. I give you the figure as true as it was poſſible for me to do, both of the one and the other of theſe *Athannors*, and a particular Deſcription of the latter as being leſs known, though much more uſeful. And that you may the better underſtand it, I will make it of one Tower plac'd between two furnaces only, of which one may ſerve for a *Balneum Mariæ*, the other for the Bath of aſhes or ſand.

Raiſe the Tower and the two Furnaces upon a plain ground, which you may build of Bricks and Lute againſt any wall. This flat ground muſt take up five foot and two inches in length, nineteen inches and a half in breadth, and eight inches in height. The Tower muſt be rais'd and built upon this Plat-form with two furnaces, and plac'd between them both. The height of the Tower muſt be 3 foot and ſeven inches, the breadth twenty ſix inches, and the length equal to that of the Plat-form. The height of every furnace muſt be twenty inches, the length eighteen, and their breadth equal to that of the Tower. Firſt you muſt raiſe upon the Plat-form eight inches and a half of maſſie building for the Tower onely, according to the breadth and length already ſet down: Upon which Maſſie-building, thus rais'd, begin the outward walls with the inſide of the Tower, and leave the void place for the coals. It will be alſo expedient at the ſame time to raiſe the two Furnaces which are to be joyn'd to the Tower and to depend upon the ſame Building. The Tower muſt have no opening before; nor muſt it have any opening in the ſides, in its height above that of the Furnaces. Only it muſt have the two Canals appointed for the coals, ſeparated by a partition-wall, the entries whereof muſt be above the Tower, and the vents muſt butt upon the hearth of the Furnaces. The outward-walls of the Tower muſt be ſeven inches thick; the inward not above four; but it muſt have ſix in length. After this raiſe the walls before and behind to the height of four inches, and at the ſame time the middle-wall, which muſt not be above a Brick broad, and ſix inches long. Then provide a thin piece of Iron beat'n out, about two *lignes* thick, and two foot four inches in length, which you ſhall cut in ſuch manner, that it ſhall not have above ſix inches of breadth in the extent of four inches, which are to cover the breadth of the middle-wall, and that that which remains beyond the four inches, containing a foot in extent, may have eight inches of breadth in the end, and on the two ſides contract it ſelf like a Lozenge, to the part where the Plate is not above ſix inches broad. This Plate muſt alſo be bent in ſuch manner, that the part which has but ſix inches, being plac'd flat upon the middle-wall, and covering it exactly, the two wings may poſſeſs the ſloping of the height of the four inches which are allow'd to the middle-wall, and butt upon the ſide of the Building which ought to be oppoſite to the Hearth of the contiguous Furnace; ſo that the coals may ſlide eaſily a-long that Plate into the Furnace. Then muſt you neatly make a half-round hole in the walls to give way to the extent of the wings, and fill up with Lute and pieces of Brick the under-part of the ſloping of the wings, to prop them up and keep them from bending. Then go on, and raiſe all the walls of the Tower, leaving the void ſpace requiſite for the Canals, which muſt every one contain as much in length and breadth as the middle-wall which ſeparates them. Then provide bars of Iron flatted and hardened, to correſpond with the Plates; and which reſting upon the walls that are next the Furnaces, may be ſtrong enough and bow'd in ſuch manner, that leaving an equal diſtance of four inches wide over all the upper-part of the ſloping of the Plates, they may ſupport the Building neceſſary to compleat the Tower, which muſt be in all three foot and ſeven inches above the Plat-form. In building the Tower, take care that the inſide of the Canals be well clos'd, and that they may ſomewhat enlarge themſelves towards the bottom, ſo that the coals at the top may the more eaſily ſlide down; and ſucceed to thoſe that are burnt. You muſt alſo make two ſtoppers of Furnace-earth, big enough to ſtop the overtures of the Canals at the top of the Tower, after they are fill'd with coals.

The two Furnaces must have every one their Cinder-place, their Grate, their Hearth, and must be wide enough to place therein at the top the *Balneum Mariæ*, and Sand-bath. They must have also doors to their Cinder-place and Hearth, which must be made in the one and the other, quite joyning to the Tower. The Cinder-place must begin from the Plat-form describ'd before. The door ought to be five inches high and four broad. And it must be cover'd with a Plate of hardn'd Iron, upon which you must lay a whole Brick, which will serve for a stay to the door of the Hearth, which ought to be directly over that of the Cinder-place, and is also to be cover'd with a plate of Iron and a whole Brick, as the former. You must also fixe the Grate at the same time, and to the same height, as the Plate put upon the door of the Cinder-place. The inside of the Hearth ought to be nine inches in Diameter; but the void place above, where the Baths are to be set, ought to be twelve inches in Diameter. Then go on, and continue the building of the two Furnaces to their height appointed. Nor must you forget to fill up with Lute and pieces of Brick the inward corners of the furnaces, and to taper them by little and little toward the bottom of the Hearth.

It is also requisite that those furnaces should have their holes or Registers at the four upper-corners, and their stoppers ready upon occasion to increase or abate the heat of the fire. At the same time make the stoppers for the doors of the Cinder-places and Hearths.

If you are careful to follow all the proportions which I have set down for the building of this *Athannor*; if after you have kindled the fires in the Hearths of these furnaces, you fill the Canals of the Tower, with Coal neither too big, nor too small; and if after that you stop up the upper-holes of the Tower, and the doors of the Cinder-places, and Hearths, you may be sure to have an equal fire, which shall continue for four and twenty hours at least. And this fire will also heat more fiercely, if you give Air to the furnaces through the Cinder-place, and Registers.

The other *Athannors* require not so much circumspection as this, because the Coals fall not from the Tower, but must from thence impart their heat to the Furnaces which environ it. This Tower may well be square, but it is usually the custom to make them round, to the end it may impart its heat to the greater number of furnaces. These *Athannors*, are generally plac'd in the middle of the Laboratorie. This Tower has but one Canal, but it has a Cinder place, with its door, a grate, and a little door for the Hearth. There are also Plates of Iron, fit to stop the breathing-holes of the Tower, when you would hinder the Tower from communicating its heat to a furnace that has no need of it. I suppose, that by the exact description, which I have made of the preceding *Athannor*, you may easily judge of the building and use of this, so that it may suffice only to give you the Figure of it.

The first furnace, of which I have given the description, may well serve for an Example of a Reverberating furnace; But because a Man may have occasion for a good quantity of Acid Spirits, and Corrosives; and for that one Retort alone requires almost as much care and fire, as many Retorts together, I thought it my duty to impart the furnace of Reverberation, which I use my self, to distil with four Retorts at a time, which is as regular, as commodious, and certain.

These furnaces ought to be two foot and eight inches long, and two foot and six inches broad, and two foot and four inches high; The form of it ought to be four-square; The Cinder-place must be eight inches high, the door must be in the middle of the Front, six inches broad, and as many high. The Walls of the two sides must be six inches thick as far as the Cinder-place. The Walls behind and before need not be above four inches thick, no more then the Walls of the sides from the Grate upward. You must have bars of Iron a foot long, of the form and bigness of those of the first furnace, and flatted at the ends, and they must be laid also five *Ligne's* one from the other. These bars are to rest upon the inner part of the side-Walls, and are to make the Grate that is to extend from the Wall before, to that behind. Upon the door of the Cinder-place, you must fix a flat-piece of Iron, about seven or eight *Ligne's* thick, and lay a Brick upon the plate. There must be a door left for the Hearth, over that of the Cinder-place; they must be both alike, and both covered with a thin plate of Iron and a Brick. The Walls must be built of an equal height, for seven inches above the Grate: and there must be laid two square-bars of Iron, from fifteen to sixteen *Ligne's* in Diameter, which ought to be almost as long as the whole length of the furnace. These bars must be fix'd flat-ways, so that they may divide the inward bredth of the furnaces into three equal distances. These bars are to bear two Retorts each of them, at the time of the Distillation. Then go on, and raise equally the Walls of the furnace

nace above the great bars, to the height of four inches, then leave two openings in the two ſide-Walls above the Iron bars, oppoſite one to the other. Theſe openings ought to be four inches wide, and be continu'd to the height of the walls; for they are to receive the neck of the Retorts, the bodies whereof are to reſt upon the bars, with their back-ſides one againſt another. Take care to fill up the inſide corners of the furnace with Lute, and ſmall pieces of Brick, to make them in ſome manner circular, and ſo that the Hearth may ſlope like thoſe of the foregoing Furnaces; and that the fire may not fall into the corners, but may always carry its force to the middle of the Grate. Then equally raiſe round about, all that there is to be more of wall, to the entire height of the furnace. Which done have ready a plate of caſt Iron, at leaſt half an inch thick, about two foot, and two or three inches long, and about twenty inches broad, and lay it upon the top of the furnace, to cover the void ſpace, when you have fix'd the four Retorts. You muſt leave three Regiſters upon each ſide of the plate: that is to ſay, one at each corner of the hinder part of the furnace, and one juſt oppoſite to every Retort; lute all the reſt of the circumference of the plate, and prepare ſtoppers for all the reſt of the Regiſters and doors, to uſe upon occaſion, eſpecially at the beginning of the Diſtillation. Take notice alſo, that after you have plac'd the Retorts upon the bars of Iron, and put their necks through the openings of the furnace appointed for that purpoſe, you muſt with Lute and pieces of Brick, cloſe all the void ſpaces, which the necks of the Retorts cannot fill up, ſo that there may be in thoſe parts no breathing-places, but thoſe of the Regiſters. In this furnace you may give to the four Retorts all the degrees of fire requiſite, and the ſucceſs will anſwer expectation, if you obſerve the rules which I have preſcrib'd, as I come to diſcourſe of particular preparations. You may at the ſame time make uſe of a fire for Diſtillation, by vertue of a ſquare kind of Capſula, made of plates of Iron rais'd like walls, which will make an encloſure of about ſix inches high, proportionable to the bigneſs of the Iron-plate, which covers the void place of the furnace. This ſquare Capſula muſt be plac'd upon that plate, and fix'd with Lute to the ſides of the plate, and then fill'd with Sand as much as it will hold. In this Sand you may ſet ſeveral Veſſels, containing ſuch ſubſtances as you would diſſolve, digeſt, or *diſtil*; or you may make any other preparations, which the Artiſt muſt fit to the degrees and length of the fire, which the principal Diſtillation requires.

You may in the firſt furnace which I have deſcrib'd make a great number of Diſtillations, as well upright as oblique; but it will not ſerve for thoſe that are made by deſcent, unleſs you change the whole order of the furnace, which engages me to give the deſcription of another, that is proper for thoſe ſorts of Diſtillations; which, nevertheleſs, may be made either bigger or leſſer, according to the quantity of ſubſtances you would diſtil.

Draw the Dimenſions of a furnace, round or ſquare, four inches thick, and twenty inches in Diameter. In the lower part it muſt have a door eleven inches high, and eight broad, upon which you muſt fix a ſtrong plate of Iron, as is ſaid already. Provide alſo a bar of ſtrong Iron, four inches wide, in the middle whereof muſt be a round hole of three inches. This bar muſt be laid a-thwart upon the middle of the furnace; then provide other bars of Iron of a ſufficient length, of which make a kind of a cloſe Grate, of each ſide the bar of bor'd Iron; then go on with the building and raiſe it a foot above the Grate. Then prepare an Earthen Veſſel glaz'd within, and made like a *Cucurbit*, with a ſtreight neck, into which put wood, or the ſubſtance which you would diſtil: Then prepare a cover of Silver, Latten, or of Copper Tinn'd, ſo made as to cover the Orifice of the Veſſel, and ſurround the neck, like a Capſula lid, the bottom whereof muſt be bor'd through with ſeveral little holes like a ſieve. Then take another Veſſel of glaz'd Earth, or of Glaſs, the mouth whereof muſt be ſo diſpos'd, that the end of the neck of the *Cucurbit*, containing the ſubſtances, may with its bor'd cover enter in, yet not deſcend farther into the body. Then ſet the Veſſel upon its Orifice, and put it through the hole in the middle of the bar, and ſo into the Veſſel which is to ſerve for a recipient, and muſt be plac'd underneath. The *Cucurbit* muſt be ſupported by the bar of bor'd Iron: and then kindle round about it a fire, at firſt very gentle, only to give a ſoft heat to the ſubſtances, and the Veſſels, then increaſe it by little and little, and from time to time till it cover all the *Cucurbit*, if the ſubſtances be ſolid; and when you have ſufficiently continu'd your fire, you ſhall find in the Veſſel plac'd below, a liquor containing the moſt eſſential parts of the ſubſtance which you have diſtill'd. By this means you may draw forth a Spirit out of Vitriol, having calcin'd it till it become yellow, and then putting it into the *Cucurbit*, in little pieces and not in powder, and a good quantity together; but this Spirit is much inferiour to that which is drawn forth by ſide-long Diſtillation.

I dare affirm that the two furnaces of Reverberation which I have deſcrib'd, are very proper for the Diſtillation of Acid, and Corroſive Spirits; But that is no reaſon why I ſhould not ſhew you the Structure, and uſe of the following furnace.

This Furnace ought to be two and twenty inches broad in the ſquare, the walls four inches thick, ſo that the void ſpace within ought to be fourteen inches diameter. This Furnace muſt have at the bottom, in the middle of the front, a door for the Cinder-place, four inches ſquare, which ought to be cover'd with a good plate of Latten proportionable; then continue the whole Structure ſix inches high; then fix the Grate upon Bricks of full meaſure, ſet and joyn'd to the inner-wall of the Furnace, of each ſide: The bars muſt be like to thoſe of other Reverberating-furnaces. Then raiſe all the walls of the Furnace equally, nine inches above the Grate; and leave in one of the ſide-walls an Opening, ſufficient to put through the neck of a Retort; which Opening muſt be continu'd op'n to the top. Then raiſe the walls again equally one foot high above the Opening. Fill the inward-angles with Lute and pieces of Brick, as in the former Furnaces: do the ſame thing to the corners all along the upper part of the two ſides of of the Grate. Then provide a flat Duomo, made in ſuch manner, as in covering the Furnace, to reſt upon the inner-brims of the wall. Place the Retort containing the matters upon a Trevet, made ſo that the lower part of the Retort may be rais'd four or five inches above the Grate. Then with Lute and pieces of Brick ſtop up the void parts of the overtures of the Furnace, which were made for the neck of the Retort; then kindle the fire, and fill all the void ſpace with coals from the Grate to the top, having firſt kindl'd the fire upon the Grate round about the under-part of the Retort. At the ſame time cover the Furnace with its Duomo, and at the ſame time lute all the joyntures, that the fire may have no air but through the door of the Cinder-place, and the little hole in the Duomo. Then fit a recipient to the neck of the Retort; leave the fire to it ſelf, and do not unlute the Recipient, till four and twenty hours afterwards. You ſhall find the Spirit as you deſire, and in the Retort a ſediment depriv'd of all its Spirits.

I will not here dilate upon Portable-furnaces, the figure whereof is uſually round and circular, becauſe they have nothing in them that correſponds with the Furnaces which I have deſcrib'd, eſpecially the firſt. It will be ſufficient to obſerve almoſt the ſame rules already ſet down, as well for the Cinder-place, Hearth, and place for the Veſſel, as for the Doors, Openings, Regiſters and Duomo. I omit alſo Lamp-Furnaces, and many others uſeful for many things, the Deſcriptions whereof are to be ſeen in ſeveral Authors. For my part I believe I have deſcrib'd enough for any Preparation *Chymical* or *Galenic*, at leaſt to ſerve as a rule for farther invention.

CHAP. LII.

Of Lutes.

THE variety of Subſtances of which mixt Bodies are compos'd, together with that of the Furnaces and Veſſels which are made uſe of in Preparation, have put the Curious upon the Invention of moulds proper for their intentions, and to ſatisfie the neceſſity of all Operations. They have found out ſeveral for the uſual building of Furnaces; ſome to plaiſter, ſome to cover all over the Veſſels of glaſs or earth, which are to contain the Subſtances, and are for a long time to reſiſt the violence of the fire; ſome to joyn the Veſſels one to another; others to mend the Clefts which happ'n to Earth'n or Glaſs-veſſels, and to make them as fit for ſervice, as if they had never been crackt. I know very well that there is no want of Directions for Lutes in moſt Authors, who have treated of *Chymiſtrie*; but becauſe I will not refer the *Reader* thither, as being deſirous that an *Apothecary* ſhould find in this *Pharmacopœa* all things that he ſtands in need of, I will impart thoſe Lutes which I have made uſe of, which are both ſecure and profitable.

If you would build a Furnace for long laſting, and make uſe of great Stones fit to reſiſt fire, then for all ſorts of Lute there is no better, then a good Mortar made of Quick-lime and Sand. But if you build with Brick according to the uſual manner, uſe this following Lute.

Take three parts of that fat Earth, which the Bakers make uſe of for building their Ovens,

Ovens, one part of River-ſand, and one part of Horſe-dung, work them all well together with Water, and make thereof a Mortar, to bind the Bricks, when you build any Furnaces. This Mortar may be ſtiffen'd with the droſs of Iron and Glaſs pounded, as alſo with ſalt-Water and many other things, if you would make it more firm and laſting; but theſe additions are uſeleſs for an ordinary Building.

If you would raiſe a Furnace of one or more pieces, without Stones or Brick, or make Veſſels fit to reſiſt the fire, as *Capſula's, Retorts, Aladuls, &c.* Make a Paſte of two parts of Potters-earth well-dry'd, two parts of brok'n Butter-pots, both beat'n into fine powder, and one part of River-ſand, well wrought and incorporated together with Water. The Furnaces and Veſſels made of this Paſte will be good and durable, if you be careful in the firſt place to drie them well in the Air when they are made; and if afterwards you bake them in the Potter's Furnace. The ſame Paſte will ſerve to plaiſter withal and cover all ſorts of Veſſels either of Earth or Glaſs. For it is able of it ſelf alone to contain Subſtances in a violent fire, when the Veſſel it covers is many times melted or brok'n. You may alſo make another Paſte very near in goodneſs to this, and which will ſerve for many uſes. Take ſix pound of good Potters-earth dry'd, two pound of the dead-head of *Aqua-fortis*, two pound of Butter-pots brok'n, one pound of droſs of Iron, one pound of Glaſs, one pound of Brick, all beat'n into fine powder, two pound of Horſe-dung dry'd and beat'n, five or ſix handfuls of Butter well maſh'd and beat'n, work them all together with Water, and make thereof a Paſte ſomewhat ſolid, which will ſerve you for the ſame uſes.

You may alſo, for the ſame uſe, take two pound of Bricks, four pound of Potters-Earth, and a pound of Lime all beaten to fine Powder, and work them together with an equal quantity of Oxe-Blood, and water of the diſſolution of the Caput Mortuum, or deadhead of Aqua-Fortis, which will ſerve for the ſame occaſions as the fore-mention'd Lutes.

When you would ſtrongly joyn together the Recipients to the Retort, in the Diſtillations of corroſive Spirits; the firſt Lute which I have deſcrib'd and appointed for the building of Brick-furnaces, may ſuffice, if it be ſtrengthn'd with a large Linnen-cloth, bound on with pack-thred. But the Lute will be ſtronger if you add Butter well-maſh'd and beat'n to it, and if inſtead of common-water you work your Lute with Ox-blood, or with the diſſolution of the dead-head of *Aqua-fortis*. You may alſo make uſe of the laſt Lutes which I have deſcrib'd: but then it will be more troubleſom to unlute the Veſſels when the Diſtillation is over.

Amydon, or fine Wheat-flower boyl'd in Water ſpread upon Paper and laid on, may ſuffice when you only go to fit and lute the helm of the Limbeck with the Cucurbit, or to joyn the Recipients to the helm, or to the Retorts; or to lute Veſſels together that contain ſpiritful Subſtances that have no corroſion. But if you would lute them more exactly, then take the Bladder or Bowels of Beaſts newly kill'd; or moiſten'd in water if drie. They are very uſeful where the Subſtances are very ſpiritful and corroſive. The cloſures and joyntures of the Veſſels are to be cover'd with theſe Bladders or Bowels ſquaſh'd upon them, or elſe bound round about them with Pack-thread, leaving them to drie very well before the fire be kindl'd under the Veſſel. You may alſo for the ſame purpoſe make uſe of Fiſh-glue diſſolv'd in Spirit of Wine, or in Vinegar ſpread upon a Linnen-roll, and well bound upon the joyntures.

There is alſo another Lute very fit to plaiſter and cover the Retorts round about, and to make them able to withſtand any ſort of fire, and alſo to contain the matters in caſe the Retorts ſhould break. Take good Potters-earth pure and well powder'd, as much Bole-Ammoniac, and brok'n Butter-pots finely powder'd; incorporate them with Quick-lime newly quench'd in a little Milk, and add thereto the liquor of the whites of Eggs, and Butter maſh'd as much as will bind them all together, and make thereof a ſoft lute, ſoft enough to plaiſter the Retorts, three or four times, one lay above another, letting the lute laid on drie very well before you lay on drie any more. This lute will be the ſtronger if you mixe therewith a quantity of Bull's blood very hot, blend it well with all the reſt.

You may make very good Crucibles with the following Lute or Compoſition. Take equal parts of good Potters-earth dry'd, Stone-Allum, and falſe Talk, commonly call'd The Froz'n-ſtone, powder'd fine and well wrought together with a little Milk, and reduc'd to a conſiſtency fit to make Crucibles; which when you have made, bake them in a Potter's Furnace among other Earth'n-pots.

If you would mend the holes and clefts in Earth'n or Glaſs-Veſſels, and make them as good as ever they were; Take the whites of new-laid Eggs and beat them in an

Earth'n

Earth'n-pan with ſmall ſticks, till they are nothing but froth. Let that ſcum ſtand ſtill and ſtay till it be turn'd to a liquor; then mingle it in Quick-lime newly quench'd in a little Milk, and make a ſoft and cloſe Paſte to be ſpread upon a ſmall piece of fine Linnen enough to cover the ſlit in the Veſſel. Lay that upon the crack of the Veſſel, having ſprinkl'd the upper-part of the Linnen with Quick-lime very finely pulveris'd: at the ſame time lay on a new roll of equal bigneſs plaiſter'd with the ſame Paſte upon the powder of Lime, and then powder the upper-part of the ſecond Linnen-cloth with powder of Quick-lime again; then lay a third plaiſtering of the ſame Paſte, with which you ſhall cover the upper part and ſides of the laſt Linnen-roll, and then let it drie at leiſure. This Lute, thus laid on, holds perfectly well, and prevents the cracks from going any farther. There are ſome that add Glaſs finely beat'n to this Paſte; ſome mixe therewith powder of Bricks or *Terra ſigillata.* Which things may ſtrength'n the Lute, and are not to be rejected.

You may alſo very properly apply to the cracks of the Veſſels, Fiſh-glue diſſolv'd in Spirit of Wine, and ſpread upon a little piece of a Pig's or Oxe's Bladder, and let it drie.

You may alſo make a Lute very firm, and laſting in the fire for cracks of Veſſels, as alſo to plaiſter and cover them. This Lute is made with two parts of Minium in fine powder; and one part of that which they call the Fat of Herrings; theſe things ought to be well incorporated together and ſpread upon fine Linnen, and laid upon the crack of the Veſſel.

To ſtop your Bottles well and ſo that no vapour may go out, diſſolve Fiſh-glue in Spirit of Wine, and make of it a kind of Mucilage, and incorporate with it a certain quantity of the Flowers of Sulphur, and Maſtick finely pulveriz'd, to which you may add Lime quench'd in Milk. Theſe things muſt be well mix'd together, to plaiſter the mouth, as alſo the inſide of the neck of the Bottle: which being drie, nothing never ſo ſubtle can pierce it.

There is a Lute common enough very good, which is made of equal parts of Minium, Ceruſe of *Venice*, good Bole-Ammoniack and Gum Sandarack ſubtilly pulveriz'd, incorporated with Lineſeed-Oyl and reduc'd into paſte. The uſe whereof is much the ſame as of the preceding.

The *Hermetick* or Philoſophical Seal, nam'd improperly Lute, is made uſe of for glaſs-Veſſels, that contain ſome ſubſtance, of which you would preſerve all the parts. Thoſe Veſſels ought to be ſomewhat long-neck'd, and ſtrong enough to endure almoſt a Fuſion, and yet not to ſuffer the matters therein contain'd to be alter'd. To accompliſh this, you muſt bore the bottom of an Earth'n-pot able to reſiſt fire, and cauſe the neck of the Veſſel to enter underneath; then light a fire in the Pot round about the neck, and when it is near Fuſion, with a pair of Tongs heated in the fire, ſqueeze it, and writh it ſo, that it may be ſo exactly joyn'd, that not the leaſt vapour may get out.

Bottles alſo with ſhort necks, ſtrong and well-made, may be exactly ſtopt with a ſtopple of Glaſs, made fit and rubb'd round about with Emeril pulveriz'd, till they fill the hole of the bottle ſo exactly, that the vapours cannot find paſſage to get out. There is a way ſomething like this, when, after you have ſtopt the neck of the bottle with a Cork fit and ſhort, and that there remains a void breathing-place, you fill it up with melted Sulphur, or ſome one of the Lutes which I have already deſcrib'd, and cover the Lute with a double piece of Oxe's Bladder, moiſten'd and ſtrongly bound about the neck of the bottle. Maſtic, Bole-ammoniac of the Eaſt, and Borax, finely powder'd with the liquor of the white of an Egg, will make a Lute very proper for this purpoſe, and for ſeveral other uſes.

CHAP.

CHAP. LIII.

Of Inſtruments, or Veſſels requiſite, as well in the one as in the other Pharmacy.

THough I might have comprehended Furnaces in the Chapter of inſtruments, yet the skill requir'd to make them, together with their bigneſs, their diverſity of Materials, deſerv'd a particular Chapter. Under the name of Inſtrument are comprehended not only the Tools, or Utenſils, which both *Pharmacies* make uſe of, but all the Veſſels appointed to contain the ſubſtances to be prepar'd, which are prepar'd, and are to be preſerv'd after preparation. The Materials of Inſtruments are various, according to the uſe, to which they are deſign'd. Gold and Silver may ſerve for the Materials of ſome, but their dearneſs makes them not ſo frequently in uſe. Other Metals are very much us'd, as red and yellow Copper, Pewter, Lead, Steel, common Iron forg'd and wrought, as alſo ſeveral Metals, and Metallics melted alone, or mix'd together. Marble, Porphyrie, Sea-ſhells, divers Stones and Jewels, certain Horns, ſeveral Bones, divers Shells, as alſo the Eggs and Skins of ſome Animals; Woods, Roots of Trees, Shells of certain Fruits, Woollen and Linnen-Cloths, Silk, Hemp, Flax, Rind of Trees, Horſe-hair, Ropes, Pack-thred, Paper; divers Earths, and Sands, Glaſſes, Chryſtals, Bitumens; all theſe are inſtrumentally made uſe of by both *Pharmacies*, beſides a thouſand other things too tedious to repeat.

Several Veſſels or Inſtruments are made of Copper or Latten; but thoſe Veſſels that are to contain ſuch things, as are to be tak'n inwardly, muſt be Tinn'd, to prevent the Metals from imparting their bad qualities to them. The moſt uſual are Baſons, Cauldrons, Braſs-pipes for the Mores head, for the Refrigeratory, for the Roſe-water Limbecks, or for other heads of Limbecks, Stillatories for Spirit of Wine, with their Serpentine, and heads; Veſſels for *Balneum Mariæ*, and evaporating Baths, Lamp-Furnaces with their appurtenances, Cucurbits, Chafers, Platters, Poſnets, Lamps, Funnels, Capſula's, Moulds, Ladles, Scummers, Spatula's, *&c.* Several Veſſels of Pewter are us'd, as Baſins, Platters, Diſhes, Trencher-Plates, Cucurbits, Veſſels for Digeſtion, heads or helms of Limbecks, plates of Iron, Pots, Syringes, Ladles, Meaſures, Lavers, Capſula's, Ewers, Bottles, Urns, Fountains, *&c.* Lead is very much us'd to make Inſtruments, as weights and boxes. Several Metals and Metallics are us'd mix'd together, for great and ſmall Mortars and Peſtles, Boylers, Horns of Antimony, Moulds, Pipkins, burning-Mirrours, *&c.* Several Inſtruments of Iron and Steel, are us'd as well to contain the Matters, as for ſeveral uſes; as for Boylers, Cauldrons, Capſula's, Mortars, Antimony-Horns, Pots, Crucibles, Plates of caſt Iron, or beaten out, Frying-pans, Nippers, Pincers, great and ſmall Tonges, Forks, Ladles, Hooks, Bars, Grates, Moulds, Trevets, Knives, Sciſſars, Hammers, Files, Raſps, Saws, Spatula's, Peſtles, Funnels, Capſula's, Lamps, Conduits, Pipes, Rings, Irons bended round to cut off the neck of the Recipients, Compaſſes, *&c.* We uſe Jaſper, Marble, Sea-ſhells, and divers hard Stones, upon which to bray ſeveral Minerals, and to pound ſome parts of Animals. We uſe them alſo for Mortars, Peſtles, Cups, and ſeveral other Veſſels appointed for ſeveral uſes. We make an infinite ſort of Veſſels of Earth, as Crucibles, Cucurbits, Capſula's, Aladulls, Boylers, Pots, Covers, Pipkins, Plates, Diſhes, Cups, Bottles, Pitchers, bending-Limbecks, Chaffers, and the like. Several Veſſels are made of Chryſtal, as Baſins, Plates, Platters, Cups, Bottles, Vaſes, and Capſula's, *&c.* But a far greater quantity are made of Glaſs. For beſides theſe that I have nam'd to be made of Chryſtal, which may as well be made of Glaſs, we make thereof Limbeck-bells, Pelicans, and many other Veſſels fit for Circulation, Veſſels for Diſtillation, all of one piece, Matraſſes with long Necks of ſeveral proportions and forms, Cornutes, Recipients of all ſizes, ſome without a Pipe, ſome with one, two, or three Pipes; ordinary Cucurbits, others with a Pipe, or a ſtreight neck, heads of Limbecks cover'd at the top, others uncover'd; others without a beak called blind Limbecks; Mortars, Peſtles, Philoſophers Eggs, Veſſels to ſeparate liquors, Pipes, Plates, Bibbers, Pots, Diſhes, and an infinite ſight of Veſſels of all ſorts and ſizes.

We uſe Shells for cups, and to contain ſeveral Medicines. We make Capſula's, Spatula's,

tula's, Rowlers, and Peſtles of Ivory, Cups, Bottles and Boxes, Oſtridge-eggs. The ſame things are alſo made of Horn; Bags, budgets, and bottles are made of Leather. Several boxes of Tortoiſe-ſhell; cups, ſpoons, boxes, and little pixes of Amber, Jet, and Mother of Pearl. We make uſe of Wood, and the Roots of Trees for Casks, Bathing-tubs, Covers, Buckets, Mortars, Peſtles, Rowlers, Cups, Spatula's, Boxes, Preſſes, Cupboards, *&c.* We make uſe of Cloths for ſtrainers, *Hippocrates* breeches, and long narrow bags for filtring.

We alſo uſe Cloth to cleanſe the flowers of *Schoenanthos.* We make bags and ſtrainers of ordinary Linnen; we make our ſieves of Linnen, Silk, and Horſe-hair. We uſe Paper to filter ſeveral Liquors, to cover bottles, pots, and to wrap up ſeveral Medicines. In ſhort, we make uſe of a thouſand things, and a thouſand inventions, for an infinite number of Veſſels, and Inſtruments appointed for the uſe of *Pharmacy*, of the chief of which I will give you the Figure, as exact as well cut, as alſo of the Furnaces which I have deſcrib'd.

CHAP. LIV.

Of the manner of Cutting Glaſs.

THE incompatibility between the extremity of heat and the extremity of cold, joyntly acting one againſt the other, and the oft'n breaking of Earth'n and Glaſs-veſſels, which happ'ns by the pouring any hot liquor into them when they are very cold, or any very cold liquor into them when they are very hot, has been the reaſon that ſeveral wary Artiſts have endeavour'd to remedie the expoſing of their Veſſels to theſe two combating qualities. Seeing therefore that they could make good advantage of theſe two oppoſites by cutting the necks and beaks of their Glaſs-veſſels, they have made uſe of ſeveral ways to do it; of which I ſhall ſuccinctly deſcribe the moſt convenient and the moſt uſeful.

Diamonds or Emerill will ſerve to cut the ſuperfluous parts of glaſs, when they are thin. But when you would cut off the necks of Recipients, which are uſually very thick, you may ſcratch the place where you intend to cut, but you muſt make uſe of Fire and Water to perfect your deſign.

To which purpoſe you muſt make uſe of Iron-rings, about the bigneſs of your little finger, the handles whereof muſt be of the ſame metal; round and hollow well-nigh proportionable to the bigneſs of the neck of the Recipient which you intend to cut off. Heat the Ring red-hot in the Fire, and having put it over the neck of the Recipient, reſt it upon that place which you intend to cut off; and when the glaſs is heated, pour ſome drops of cold Water upon it, and the neck will drop off juſt at that place where it was heated.

You may for the ſame purpoſe wind a wiek of Sulphur round about that part of the neck which you would have cut off, and ſo order it that the flame may give an equal heat round about that part; and when the part is hot enough, pour, as before, ſome few drops upon it, and the neck will come off.

I have done the ſame thing oft-times with a wiek dipt in Turpentine, by the means whereof, uſing it according to the method of the Sulphur-wiek, I have cut off the necks of the biggeſt Recipients, as well as of the leſs; and of all ſorts of Glaſs-bottles.

If that part of the neck of the Recipient be not hot enough, and that inſtead of ſeparating quite, it only begins to break, you may perfect the work by reſting the end of a red-hot Iron againſt the crack begun, and ſo going round with the ſame Iron, till the neck falls off.

CHAP. LV.

Of Weights, and Measures.

THE Physical-pound never consisted of more than twelve Ounces, taking twelve Ounces of the ordinary Pound of sixteen Ounces; and is usually known by this Character ℔. The Physical Ounce is thus mark'd ℥ by the *Greeks*, who make it to consist of eight Drachms. They figure the Drachm like a figure of Three ʒ containing three Scruples. The Scruple is thus mark'd ℈, which consists of four and twenty Grains, being the third part of seventy two which a Drachm ought to weigh. The Grain is thus mark'd *Gr.* or thus $\overline{g}$.

Sometimes the Physical-Pound is divided into two parts, and the Half is thus mark'd ß. Sometimes it is divided into four parts, which fourth part is call'd *Quartarium*, known by this abbreviation *Quart. j.* But most usually the Pound is divided into several Numbers of Ounces, which the *Physicians* specifie in their Bills, rarely mentioning Half-pounds or Quarter-pounds. The mark that stands for Half a pound stands for Half an Ounce, Half a Drachm, Half a Scruple, being preceded by their several Marks.

Herbs, Flowers, and several Roots are not weigh'd in Vessels, they are only measur'd by *Fascicles*, *Manipules*, or *Pugiles*. *Fasciculus*, or a Bundle, contains as much as a Man can hold under one Arm bent to the upper part of the Hip, and is thus mark'd *Fasc.* *Manipulus*, is as much as a Man can grasp in his hand, thus character'd, *M.* *Pugillus*, is as much as a Man can grasp with three Fingers; and is known by this Character *Pug.*

CHAP. LVI.

Explaining several Physical Terms.

WHEN you find in any Receipt the five opening Roots prescrib'd, you must understand the Roots of Asparagus, Smallage, Parsley, Fennel and Butchers-Broom.

The usual Emollient-herbs are Mallows, Marsh-mallows, Bear-foot, Groundsil, Beets, Mercury, Violets, Arrach, Pellitorie of the Wall, and Lillies.

By the five Maindenhairs, are meant *Adiantum album*, White-maidenhair, *Adiantum nigrum* or common Maidenhair, *English*-maidenhair, Ceterack or Spleen-wort, and Wall-Rue: to which I may add Harts-tongue.

The three Cordial-flowers are Bugloss, Burrage and Violets; to which others add Gilly-flowers and Roses.

The four Carminatives, or Wind-dissolving Flowers, are Camomil, Melilot, Fetherfew and Dill-flowers.

The four great hot Seeds are, Anise, Fennel, Cumin and Caraway-seeds.

The four lesser cold Seeds are Parsley, Smallage, Ameos or Bishops-weed, and Daucus or Wild Carrot-seeds.

The four greater cold Seeds are Gourds, Citruls, Melons and Cucumbers.

The four lesser cold Seeds are Lettice, Purslane, Endive and Succorie.

The five precious Fragments are Jacinths, Emraulds, Saphyrs, Granates and Sardonyxes.

The four Cordial Waters are Burrage, Bugloss, Endive and Succorie.

Some add to these Meadow-sweet, Blessed-thistle, Devils-bit, Scabious, Water-Germander, Sorrel, Vipers-grass and Wood-sorrel.

The *Physicians* prescribe several Fruits by number, with this mark N°. or by pairs, mark'd thus *Par.*

When you find the word *Ana*, or the Character ā ā, it signifies of equal quantity.

By *s. a.* or *ex Arte*, is to be understood *According to Art.*

By *q. s.* is to be undestood, *As much as is sufficient.*

And for that the *Apothecary* ought to be the Eye of the *Physician*, as well in the Pre-

paration of Remedies preſcrib'd, as in the Adminiſtring thereof. It is very neceſſary for him not only to underſtand whatever written or printed Receipts ſhall come to his hands, but alſo to know the proportion and Doſes of every Medicine. To the end that in caſe any miſtake ſhould happ'n by the careleſsneſs of the *Printer* or *Writer*, or that he ſhould not be able to read ſome bad Hands, he may be able to judge both of the Doſes and Ingredients, make them agree with the Rules of *Pharmacy*, and the approbation of judicious *Phyſicians*, and prevent the ill-accidents that may happ'n by falſe Preparation and Adminiſtration.

I did not think it neceſſary to inſert here ſeveral things which may be found in ſeveral Authors; among the reſt, the Catalogues of ſeveral Medicaments, which being only ſome part either of ſome Plant or Animal, are to be underſtood ſuch as are to be preferr'd before the other parts, when the Plant or Animal is preſcrib'd, without naming the particular part; as the Seeds of Anniſe and Fennel, Roots of Orrice and Jallap, Flowers of Violets and Roſes, Fruits of Melons and Cowcumbers, Juices of the bending *Egyptian* Beantree, and the under-growth of Ciſtus; the Wood Santalum and Guiacum, Gums Galbanum and Ammoniac; Rinds of Cinnamon and Caſſia; and ſeveral other parts of Plants and Animals which are to be underſtood, when the Plant or Animal is preſcrib'd. Such as are alſo Caſtoreum, Bezoar-ſtone, Musk and Civet, which are but parts or excrements; yet ought to be underſtood, when the Animals are preſcrib'd. There are alſo Minerals, which being but *ſpecies* of themſelves, yet for their excellency, retain the name of the *genus*. Such are *Lapis Lazuli*, which is to be underſtood under the word *Lapis*; Bay-ſalt, under the name of Salt; the Seal'd-earth of Lemnos, under the name of Seal'd-earth; the other Seal'd-earths with their additions, without which they would never be underſtood. They that are more curious may be better ſatisfy'd, by reading Authors, who have reckon'd up vaſt number of theſe things; though here be no great neceſſity of it, in regard that uſe and the Explanation that a Man ſhall meet with in the Compoſition, may ſuffice. You may alſo find in the ſame Authors Catalogues of ſuccedaneous Remedies, which would be both tedious and troubleſom to enumerate. I will only ſay this, That you muſt avoid as much as poſſible the uſe of ſubſtituted Medicines, not ſparing for any coſt to be furniſh'd with the ſame Medicaments which are ſet down in the *Pharmacopœical* Compoſitions, or preſcrib'd by the *Phyſicians*. And then when it is impoſſible to have all that the *Phyſician* preſcribes, then muſt an *Apothecary* be careful not only to ſubſtitute Root for Root, Wood for Wood, Juice for Juice, Rind for Rind, Herb for Herb, Seed for Seed, Oyl for Oyl, Syrup for Syrup, *&c.* but alſo to have ſuccedaneous or correſponding Medicaments near in vertue and quality, to thoſe whoſe defect they are to ſupply.

The End of the Firſt Part.

THE Royal Pharmacopœa,

CONTAINING GALENICAL PREPARATIONS AND COMPOSITIONS.

THE SECOND PART.

The Order and Method of the Second Part.

EVERY Apothecary, who well understands the Generalities contain'd in the First Part of this *Pharmacopœa*, may easily of himself undertake several Preparations, especially if he have attain'd the true knowledge of his Profession.

Nevertheless, I will not omit from time to time to give young beginners, those necessary directions that concern as well the particular knowledge of the principal Medicaments, that are put into Compositions, as their Preparation and just Mixture. But before I go any farther, I must advertise the Reader, once more, that there is not in this *Pharmacopœa*, any Receipt, nor description of any Composition, either Internal or External, which has not been prescrib'd by Monsieur *Aquin*, chief Physician to His Majesty, or which he has not taken the pains to examine very carefully, and very often corrected and reduc'd into a better regulation, then that wherein the Ancients had left it. He must also take notice, that instead of a great Number of certain Compositions which are now quite out of use, with which the most part of Dispensatories are pester'd, and which are more costly then profitable, he shall find in this Book, amongst the best of Compositions, and most in use, several descriptions of Remedies, as certain as full of curiosity, and which well deserve to be set down, and to be prepar'd and us'd. This *Galenic Pharmacopœa* shall be divided into two books; of which the first shall treat of Preparations, and Compositions Internal; and the second only of those which are accounted External. I will begin the first with the most simple Preparations or Compositions, especially those that cannot be kept any long time, and which may be suddenly prepar'd, and almost every foot; and from thence I shall proceed to those that are of greater consequence, and require more exactness, and whereof the Shops are wont to be still provided. I shall not make any stay upon certain things that require no great consideration, but apply my self to things of consequence, not omitting any thing that may serve for the instruction and advantage of the Apothecary, for whose sake I have principally undertaken this work. I shall not contradict the judgement of the Ancient or Moderns;

derns; where I shall find their practice fit to be imitated: But I shall endeavour to find out something better, and more maintainable, where experience and reason will not otherwise be satisfy'd. Nevertheless, it shall not be said, that I take delight to blame any Person in particular, it not being my humour to seek the raising of my Reputation by defaming others; being fully perswaded, that every Authour hath cordially written what he knew, and what he believ'd to be truth.

I might insert simple distill'd Waters among the *Galenical* Compositions; but because they must be attended by several compound Waters, that require more skill; and that both the one and the other stand in great need of *Chymical Pharmacy*, I thought fit to reserve them for the Third part of this Work.

THE FIRST BOOK, OF INTERNAL PREPARATIONS, AND COMPOSITIONS.

CHAP. I.

Of Juices.

I Shall not here stay upon Juices or Liquors which may be drawn out of Animals, as Blood, Flegm, Urine, Serosities, Sweat, *&c.* Nor upon those which may be drawn from their parts by assation, pressing, or otherwise, as the Gravies, and Liquors of Meats, *&c.* Nor upon such as are to be drawn from the stock of Minerals, as Oyl of *Petroleum*, or *Naphta*, and several bituminous matters, but only upon the Juices of Plants.

The Juice is the same in Plants, as the blood in Animals: and it may be defin'd to be a liquid substance, which making a part of the composition of Plants, communicates to the rest of the parts, that which is necessary for their support, as also for their growth. This Juice issues out sometimes of it self, sometimes it is drawn forth by incision, or some other way more artful. This Juice is more or less liquid, according to the several concoctions which it has received from Nature, either in the Plant, or above or without the Plant. It is sometimes Watry, sometimes Winy, sometimes Oyly, Gummy, Rosiny, Bituminous. It is also sometimes sweet, sometimes bitter, eager, sharp, insipid. And as sometimes it has no scent, sometimes it is odoriferous, sometimes it stinks, sometimes it is black, sometimes white, green, blew, yellow, red, *&c.* It is also more or less abounding, according to the Nature and condition of the Plant. Sometimes it is so inwardly united, and so profoundly conceal'd among the other substances, as not to be perceiv'd by the ordinary senses, nor be distinguish'd but by separating it by the means of fire. Such are the Juices or Liquors which issue from the dryer sort of Woods in Distillation, as also the Juices drawn from the Horns and bones of Animals, though seemingly very dry. The Juice is also sometimes mix'd with sub-

substances so viscous, and tenacious, though soft, that it cannot be separated but by the means of fire. Nevertheless, these juices are not to be taken barely and purely, for that part which I have called Flegm, and which I have acknowledg'd for one of the five principles, of which every mixt body ought to be compos'd; for sometimes they themselves are compos'd of some or other of the other principles, which is easie to prove by the separation which the Artist may make thereof.

In which respect, I am not of the opinion of those that make the Juices, which issue out of Plants of themselves, to be Excrements. For then the most essential part of the Plant would be taken for an Excrement; and if it were an Excrement, it ought to be rejected. And yet we gather very carefully, purchase very dear, and use to good advantage these pretended Excrements, as Myrrh, Bdellium, Tacamahacca, Storax, Benjamin, Natural-balsom, and several others which the Plants throw out of their barks, and which cannot but be accounted the best part of their composition. But now of those Juices that are to be prepar'd, and depend upon the skill of the Apothecary.

These Juices are drawn almost from all parts of the Plants; some by cutting the bark, to be afterwards dry'd in the Sun, as are the Juices of Scammony, Aloes and Poppy: Others by bruising and pressing. Thus as well Oyls as Aqueous Juices, are drawn from several Herbs and several Flowers; several Fruits and several Seeds. Such are the Juices of Carduus, Endive, Succorie, Burrage, Bugloss, *&c.* for Herbs. The Juices of Roses, Violets, Peach-flowers, red-Poppies, *&c.* for Flowers. The Juices of Mulberries, Apples, Cherries, red Goose-berries, Barberries, *&c.* for Wine-Fruits. The Juices of Olives, Walnuts, Small-nuts, Almonds, Pine-apples, Pistaches, *&c.* for Oily Fruits. The Juices of the four greater cold Seeds, as also from the Seeds of Poppies, Danewort, Henbane, Marjoram, *&c.* for Oily Seeds. The other Juices are drawn by the addition of some Liquor; which cannot be avoided when the parts of the Plant are dry by accident, or that they have not moisture enough in themselves. Such are the Juices of Senna, Rhubarb, Angelica, Liquorice, Hellebore, *&c.* which are drawn forth by the addition of Liquor, and which being filter'd, are evaporated over a small fire; to the consistency of an Extract, of which they bear the name, and of which I shall speak in the Third Part of this *Pharmacopœa*.

Generally we bruise in a Marble-Mortar, or made of some hard-stone, with a Pestle of Wood, the Herbs, the Flowers, the Fruits, the Seeds, out of which we intend to draw the Juices, and then put them into a strong Cloth, or Bag, and squeeze out the Juice, either with your hands, or in a Press between two flat-pieces of Tin, Iron, or Wood. Then we let the Juice stand for some days, or else we expose it some days to the Sun; and then we pour out the clearest softly by inclination; and keep it so, or else strain it through *Hippocrates* breeches; or through some cloth-strainer, if the Juice be not clear enough, or if it be aqueous. The Juices of Herbs which are to be first made use of, or which ought to be clarify'd and boil'd with Sugar, or honey, or to be mingl'd and boil'd with Oyntments, and Emplaisters, have no need of all this care. But the Wine-Juices of Fruits must be well-clarify'd. For they must first be expos'd to the Sun, then strain'd, to the end that by that heat and digestion, and by that straining the grosser parts of the Juice may be separated from the pure. These Juices are to be run through a bag, or rather through brown-paper, and they may be boil'd up with Sugar or honey, or be kept in bottles fill'd up within a small matter of the top; which vacancy must be fill'd with Oyl of sweet Almonds, to hinder the air from getting in and putrifying the Juice. However, after that, be careful to stop the bottles well, and to keep them in a place moderately cool, to make use of as occasion serves: At which time pour away the Oyl, and make use of the pure Juice, throwing away the feces. The Juices of Roses, and Peach-flowers, require the same care as the Wine-Juices.

Take notice that in drawing forth Acid red Juices, particularly that of Granates, you must do it in Glass-Vessels, or Gally-pots, or of glaz'd Earth, have your hands very clean, and take an especial care that no Iron come near it, for fear of spoiling the colour. The Juice and also the Syrup of Kermes require the same care, for they lose their colour in Vessels of Iron or Copper.

To draw forth the Juice of certain viscous Plants, such as are Purslain, Burrage, Bugloss, and the like, the best way which I have found, is to put them whole into a Copper-Bason, tinn'd within, over a moderate Charcoal-fire, and there to keep them, stirring them from time to time, till some part of the Juice be got together at the bottom of the Bason. Then separate this Juice by inclination; and set the Bason again upon the fire, and continue to keep it there and to stir the herbs, and to separate the Juice

by

by inclination, till you have Juice enough. By this means you will have leſs trouble, have ſooner done, and the Juice ſhall be much more pure, then by bruiſing the Herbs. I refer the Oylie-juices of Fruits and Seeds till I come to ſpeak of Squeez'd-oyls.

CHAP. II.

Of Infuſions, and Decoctions.

I Thought it beſt to diſcourſe of Infuſions and Decoctions immediatly after Juices, by means whereof the more ſucculent and eſſential parts of Medicaments are imparted to the Liquors. Beſides, Decoctions and Infuſions are made uſe of in ſo many *Galenical* Compoſitions, that I deem'd it convenient to give ſome general Rules, before I go any farther. They are ſometimes made uſe of to ſoft'n and boyl Medicaments, and ſometimes to take away or correct ſome bad quality: but their chiefeſt uſe is to communicate their Vertue to ſome Liquor, and to unite and aſſemble in one Liquor the Vertue of ſeveral Medicaments joyn'd together.

Infuſions differ from Decoctions in degree of heat, and time in boyling. For Infuſions are oft-times made without fire: and when there is any need of it, it muſt be very moderate, and require a long time; ſometimes for ſeveral hours, ſometimes for ſeveral days. Whereas Decoctions are at an end in a quarter, half, or a whole hour, and that the longeſt ſeldom exceed five or ſix hours. I have joyn'd theſe two Preparations together, by reaſon of the great affinity which they have one with another; and for that many times Infuſions precede Decoctions.

Decoctions differ according to the Subſtance of the Mixt-body which you are to boyl. For ſuch Mixt-bodies as are of a compact ſubſtance and hard to penetrate, require a longer boyling, then they that are of a middling ſubſtance; and theſe again require more boyling then thoſe that are of a tender ſubſtance. The ſame diverſity of Subſtances requires alſo leſs or more Liquor. For there muſt be more for Medicaments that require long boyling, then for thoſe that require leſs: For a long Decoction requires much moiſture. The ordinary proportion is ſix times the weight of Liquor to the Subſtance boyl'd. But if the matters be of a compacted ſubſtance, you may make uſe of eight, nine or ten times the weight in Liquor. And if the Subſtances are very ſolid indeed, you may advance to twelve or ſixteen times the weight of Liquor. You muſt alſo take notice that Medicaments of a compact Subſtance will endure a more violent fire and longer boyling then thoſe of a middling or a tender Subſtance: and ſome there are which are not put into the Decoction, till you are ready to take it off the fire. Others there are which have only need of a bare Infuſion to communicate their Vertue to the Liquor. So that it is abſolutely neceſſary for an *Apothecary* to know the various Subſtances of Medicaments, to judge by that how he ought to regulate their Infuſion or Decoction; becauſe that Preſcriptions never mention the regulation of the Decoction, nor the degrees of fire, nor the length of time requiſite for the Decoction, which is all left to the prudence of the *Apothecary*.

And now to proceed in order; When you are to make a Decoction of ſeveral Medicaments, you muſt begin with the moſt ſolid, ſuch as are Woods, then put in Roots and Barks, after that Fruits; next to them Herbs, Berries and Seeds; Flowers muſt be reſerv'd to the laſt. You muſt raſp, or bruiſe or cut very ſmall the Woods, Roots and Barks, ſlit the Fruits, chop the Herbs, and bruiſe the Berries and Seeds, and put in the Flowers as they are.

This Rule however is not ſo general but that it may have its exception. For a wood of a thin and ſpungie Subſtance requires leſs boyling then a wood more cloſe and ſolid. Barley whole endures as much boyling as wood. On the other ſide Aromatic-roots and woods will not endure long boyling; but the better parts will diſſipate. Barks, Fruits and Aromatic-ſeeds, require only a bare Infuſion. Liquorice-root is put in after the Herbs. The Maidenhairs, or Capillaries, at the ſame time with the Liquorice or immediately after. The Cold-ſeeds at the ſame time as the Flowers. The Flowers of the Water-Lilly endure as much boyling as the Herbs.

You muſt obſerve the ſame order in the Decoctions of Animals; for the Horns and Bones require longer boyling then the Fleſh. Beef requires more boyling then Mutton, Mutton then Veal or Capon, and both more then young Pullet.

Theſe

These general Rules will be much more demonstrable in the progress of these Discourses. And though the various examples of Decoction which you will meet with, might suffice, I will not omit to give you here certain Examples, which will serve for certain Decoctions, which have been prescrib'd without putting down the Medicaments of which they ought to be compos'd.

A Cordial Decoction.

℞. *Hordei integri,*	℞. Whole Barley,
Radicum Scorzoneræ,	Roots of Vipers-grass,
Borraginis,	Borrage,
Bugloß. ana. ℥ j.	Buglos, *ana.* ℥ j.
Foliorum earundem Plantarum	Of the Leaves of the same Plants,
Endiviæ,	Endive,
Cichorei,	Succorie,
Oxytriphylli, an. M. j.	Wood-Sorrel, *an.* *M. j.*
Capilli Veneris Monspelienſis, M. ß.	Maidenhair of *Montpelier,* *M. ß.*
Liquoritiæ raſæ, ℥ *ij.*	Liquorice slic'd, ℥ ij.
Quatuor Seminum Frigid. maj. mundat. ana. ℥ ß.	The four greater Cold Seeds cleans'd, *ana.* ℥ ß.
Trium Florum cordialium, ana. Pug. ß.	The three Cordial Flowers, *ana. Pug.* ß.
Fiat ex Arte decoctum in ℔ *ſex aquæ fontanæ ad tertiæ partis conſumptionem.*	Make a Decoction according to Art in six pints of Fountain-water, till the third part be consum'd

Wash the Barley and boyl it a good quarter of an hour in the water, then put in the Roots; which must be well-wash'd, the pith tak'n out, and the out-side par'd off, and then slic'd. Boyl them with the Barley a good quarter of an hour, then put in the leaves of the Viper-grass, Burrage, Buglos, Endive and Succorie, well-wash'd and cut. After you have boyl'd them a small quarter of an hour, with all the rest, add the Liquorice scrap'd and slic'd, the Wood-Sorrel, and the Venus-hair slightly cut; let them boyl a little, then put in the cold Seeds well-bruis'd and the cordial Flowers, and having plung'd them into the Decoction, take the Posset from off the fire, and strain the Liquor through *Hippocrates's Breeches* or a Wooll'n-cloth, when it is half-cold.

A Pectoral Decoction.

℞. *Hordei mundati,* ℥ ß.	℞. Cleans'd Barley, ℥ ß.
Jujubarum,	Jujubs,
Sebeſten. an. N°. *xij.*	Sebestens, *an.* N°. *xij.*
Paſſularum ab acinis purgatarum, ℥ *vj.*	Raisins of the Sun ston'd, ℥ *vj.*
Ficus pingues,	Fat Figs,
Dactylos enucleatos, an. N°. *vj.*	Ston'd Dates, *an.* N°. *vj.*
Foliorum Scabioſæ,	Of the Leaves of Scabious,
Pulmonariæ, an. M. j.	Lung-wort, *an.* *M.* 1.
Hyſſopi,	Hysop,
Polytrichii,	Gold'n-Maidenhair,
Florum Tuſſilaginis, an. P. j.	Flowers of Coltsfoot, *an.* *P. j.*
Glycyrrhizæ, ℥ *ij.*	Liquorice, ℥ *ij.*

Make a Decoction in four pints of Fountain-water to the consumption of the third part. Boyl the Barley a good quarter of an hour in the Water, then put in the Dates, the Raisins of the Sun, the Figs, the Jujubs and the Sebestens slic'd. Boyl all these Fruits with the Barley for another quarter of an hour; then put in the Scabious, Lung-wort and Hyssop cut: boyl them another quarter of an hour; after which, put in the Liquorice scrap'd and slic'd, the Golden-Maidenhair, and the Flowers of Coltsfoot; give them a little boyling, and then take them off from the fire, and strain the Decoction, when it is half cold.

An Opening Hepatic *Decoction.*

℞. *Radicum quinque aperientium,*		℞. Of the five Opening Roots,	
Fragariæ,		Strawberrie-roots,	
Bugloſs. an.	℥ *vj.*	Bugloſs-roots, *an.*	℥ *vj.*
Foliorum Endiviæ,		Leaves of Endive,	
Cichorei,		Succorie,	
Lupuli,		Hopps,	
Agrimoniæ,		Agrimonie,	
Pimpinellæ,		Pimpernel,	
Cerefolii,		Chervil,	
Taraxaci, an.	*M. j.*	Dandelyon, *an.*	*M. j.*
Capilli Veneris Monſpel.		*Venus* Maidenhair of *Montpelier,*	
Polytrici, an.	*M.* ß.	Golden-Maidenhair, *an.*	*M.* ß.
Seminis Apis,		Seeds of Parſley,	
Milii Solis, an.	℥ *ij.*	Gromel, *an.*	℥ *ij.*
Semin. quatuor frig. Maj. mund. an.	℥*j.*	The 4 bigger cold Seeds cleans'd, *an.*	℥*j.*
Glycyrrhizæ,	℥ *ij.*	Liquorice,	℥ *ij.*
Florum Bugloſſi,		Flowers of Bugloſs,	
Borraginis,		Borrage,	
Geniſtæ, an.	*Pug. j.*	Broom, *an.*	*Pug. j.*

Make a Decoction according to Art in ℔ *viij.* of Fountain-water, to the conſumption of the third part.

Waſh the Roots well, take out the pith and ſcrape their outſides, and having bruis'd and ſlic'd them, let them boyl half an hour in the Water. Then take the Hopps, the Endive, Succorie, Agrimonie, Dandelyon, Pimpernel and Chervil ſhred, and let them boyl about a quarter of an hour with the Roots. Then add the Seeds of Parſley and Gromel ſtamp'd, and having let them boyl never ſo little, put in the Liquorice ſlic'd and bruis'd, and preſently after the cold Seeds bruis'd and the Flowers; put them down into the Decoction, and at the ſame time take it off, and ſtrain it when it is half cold.

A Cephalic *Decoction.*

℞. *Radicum Valerianæ majoris,*		℞. Roots of the bigger Valerian,	
Icreos Florentinæ,		Florence Orrice,	
Pæoniæ maris,		Male-Peonie,	
Acori veri,		The true Aromatical Reed,	
Viſci Quercini, an	℥ ß.	Miſleto of the Oak, *an.*	℥ ß.
Foliorum Betonicæ,		Flowers of Betony,	
Salviæ,		Sage,	
Majoranæ,		Marjoram,	
Calaminthæ Montanæ,		Mountain-Calamint,	
Chamædryos, an.	*M. j.*	Germander, *an.*	*M. j.*
Seminum Rutæ,		Seeds of Rue,	
Pæoniæ maris,		Male-Peonie,	
Baccarum Juniperi, an.	℥ *ij.*	Juniper-Berries, *an.*	℥ *ij.*
Florum Roriſmarini,		Flowers of Roſemary,	
Stœchados,		Caſſidonie,	
Lavendulæ,		Lavender,	
Calendulæ,		Marigolds,	
Lillii Convallium, an.	*P. j.*	Lillies of the Vallies, *an.*	*P. j.*
Tartari crudi,	℥ *j.*	Raw-Tartar,	℥ *j.*

Make a Decoction according to Art in ℔ *vj.* of Fountain-water to the conſumption of the fourth part.

The Raw-Tartar is preſcrib'd in this Decoction, as well to communicate to the Water the vertue of the Medicaments therein preſcrib'd, as to retain in ſome ſort their volatile parts; and to prevent diſſipation during the Decoction. And though I do not contradict the opinion of thoſe that would avoid boyling the parts of Aromatic Plants, eſpecially in uncover'd Veſſels; nevertheleſs I believe we may yet allow ſomething to the

the ancient Customs, provided there be requisite care tak'n. The Roots of Peonie, Valerian, Orrice and Acorus are to be well bruis'd, as also the Misletoe of the Oak, and the raw Tartar, and then put into an Earthen glaz'd pot, with the quantity of water prescrib'd: and having cover'd the pot, boyl the Decoction over a gentle fire, during a small quarter of an hour; then put in the cut Herbs, and covering the pot, let them boil a quarter of an hour longer: then put in the berries and seeds, and cover the pot again, and after having given them four or five wambles more, put down the flowers into the Decoction, cover the pot, and take it off from the fire; and when it is half cold, strain it gently from the sediment.

CHAP. III.

Of Juleps, and Apozems.

I Shall not go about here to set down the Juleps of Roses, and Violets of the Ancients, nor any other of the same Nature, as being now out of use; their consistency and name being now chang'd into those of Syrups. I shall only say that the name of Julep has been formerly given to certain liquid compositions, made with distill'd Waters, or slight Decoctions, which are boil'd with Sugar, to a consistency much thinner then that of Syrups: For they had no design to keep them, but prepar'd them as they had occasion. The name of Julep is still now-a-days giv'n to certain Remedies, which have some agreement with the Juleps of the Ancients; but they are less sweetn'd with Sugar, and less fit to keep: For usually they never put above an ounce of Sugar, or an ounce and a half of some Syrups, to six or eight ounces of some distill'd Waters, of some decoction, or some other Liquor. We never boil these Liquors with the Sugar or Syrups, but only mingle them together when they are to be given to the patient, who may drink them as their ordinary drink, abating some thing of the quantity of Sugar and Syrups mix'd therewith. All these Juleps may be made tart with Spirits or Acid Juices. But they will not keep above twenty-four hours in the Summer in a cool place, and not above two or three days in the Winter.

Apozems are Medicines very near the Nature of Juleps: But they admit of a greater Number of Medicaments, which render them less pleasing. They are seldom compos'd of any thing but the Decoctions of the various parts of plants. And hence it is, that they have deriv'd their Name. For the Greek word Ἀποζέω, signifies to boil, from whence ἀπόζημα, *Decoctum*, or, a thing boil'd. I could insert here several Examples, but I refer the *Reader* to the Decoctions of the preceding Chapter, which may be call'd Apozems. We may add purgative Medicines to these Decoctions, and dissolve therein several Syrups, as they are intended for this or t'other Disease.

CHAP. IV.

Of Emulsions and Almond-Milks.

EMulsions are liquid Medicines very pleasing to the taste, whose colour and consistency is very like to that of Milk. They are usually compos'd of Seeds, or Oily Fruits, beat'n in a Marble-Mortar, with a Woodd'n-pestle, and then dissolv'd in distill'd Waters, or in slight Decoctions, which you must strain and press out, and sweeten with Sugar or Syrups.

Emulsions are prepar'd for several purposes, especially to temper the excessive heat of the Lungs, and of all the Breast; to take off the sharpness and acrimony of the humours, and to assuage the boiling of the Blood, the heat of the Urine, and the Reins. For which reason they are us'd not only in stoppages of the Urine, and in Gonorrhea's, but also in Inflammations of the Natural parts of those that are troubl'd with Venereal Distempers. They are also successfully us'd to temper the excessive heat of the Entrails, and to provoke sleep and rest. Emulsions are also very proper to sweet'n the Acrimony of the Humours in Dysenteries, to assuage pains, and heal Excoriations. Of all which

things it will be convenient to give some examples; and first, for the Distempers of the Lungs, and Breast.

℞ *Amygdal. dulcium mund.* ℥j.
Seminum 4. frig. maj. Mundat.
Bombacis, an. ʒij.

Contundantur in Mortareo Marmoreo Pestillo Ligneo, sensim affundendo, aquæ Tussilaginis, Scabiosæ, Papaveris, Rhœados, vel decocti hordei, Passularum Mundat. & Liquoritiæ, ℔j ß. *Colentur & Exprimantur. Expressioni adde Syr. Violar. et Capill. Veneris, an.* ℥j ß. *fiat emulsio pro tribus dosibus, longe a pastu sumend.*

℞ Sweet Almonds cleans'd, ℥j.
The four greater cold Seeds cleans'd,
Bombax, *an.* ʒij.

Bruise these in a Marble-Mortar, with a Woodd'n Pestle, pouring by little and little upon them, Colts-foot, Scabious, wild Poppy-water, or decoction of Barley, Ston'd-Raisins, and Liquorice, ℔j. ß, strain and press them out. To the liquor prest forth, add Syrup of Violets and Venus-hair, *an.* ℥j. ß. Make an emulsion for three doses to be taken a good distance before or after Meals.

If Acrimony of humours, boiling of the blood, want of rest and sleep, accompany Diseases of the Lungs and breast, you may add to the Emulsions two drams of white Poppy-seed, and as much Lettice-seed, and change the Syrup of Violets, and Venus-hair into those of White-poppy and Water-Lillies.

And if you would prepare Emulsions against the heat and difficulties of Urine, whether caus'd by strange substances contain'd in the Reins, or in the Ureters, or in the bladder, or through any ill temper of the parts, or through any Venereal Malignity: then observe what follows.

℞. *Seminum 4. frig. maj. mundat,*
Milii solis
Papav. Alb. an. ʒiij

Contundantur in Marmoreo Mortareo, sensim affundendo, Decocti Radicum Althææ et Nymphææ, ℔j. ß. *Colentur & Exprimantur: Expressioni adde Syrupi de Althæa & Nymphæa, an.* ℥j. ß. *Salis Prunel.* ʒiij. *fiant tres doses longe a pastu exhibend.*

℞. Of the four greater cold seeds cleans'd,
Gromel and
White-Poppy-seed, *an.* ʒiij.

Bruise them in a Marble-Mortar with a woodd'n-pestle, pouring by little and little upon them, a pint and a half of the decoction of the Roots of Marsh-mallows and Water-Lillies: strain and press them, add to the straining Syrup of Mallows, and Water-Lillies, *an.* ℥j. ß Sal-prunella, ʒiij. Make three doses, to be given a good while before or after Meals.

Emulsions against the Dysenterie may be thus prepar'd.

℞. *Amygdal. dulc. excorticatarum,* ℥j.
Seminum Sumach,
Lactucæ,
Papaveris Alb.
Cydoniorum, an ʒij.

Contundantur in Mortareo Marmoreo, sensim affundendo, decoct. hordei mundat. Portulacæ & Veronicæ, vel aqu. Plantaginis, Rosarum, & Veronicæ, ℔j. ß *Colentur & Exprimantur: Expressioni adde Syrup. Cydoniorum & Papaveris Albi, an.* ℥j. ß *fiant tres doses horis commodis exhibendæ.*

℞. Sweet Almonds blanch'd, ℥j.
Seeds of Sumach,
Lettice,
White-Poppy,
Quinces, *an.* ʒij.

Bruise all these in a Marble-Mortar, pouring upon them by degrees one pint ß of the Decoction of cleans'd Barley, Purslain, and Speed-well, or of the waters of Plantain, Roses, and Speed-well. Strain and press them: To the straining add Syrup of Quinces and white-Poppy, ℥j. ß make three doses to be tak'n at convenient hours.

The

The Following Emulsions are proper to kill Worms.

℞. *Nucleorum Persicorum Excorticatorum,* ʒ ß
Seminum Citri,
Portulacæ,
Contra vermes, an. ʒ ij.

Contundantur in Mortareo Marmoreo, sensim affundendo aquarum stillatitiarum Naphæ & Portulacæ, an. ʒ vj. *vel decocti Radicis Graminis, & Rasuræ Cornu-cervi,* ℔ j. *Colentur & Exprimantur, Expressioni adde Syrupi de Limonibus,* ʒ ij. *fiant duæ vel tres, vel quatuor Emulsionis doses, longe a pastu sumend. Melius succedent, si Lunæ decursu exhibeantur.*

℞. Of the Kernels of Peaches, the Husks tak'n off, ʒ ß
Seeds of Citron,
Purslain,
Wormseed, *an.* ʒ ij.

Bruise them in a Marble-Mortar, pouring upon them by degrees, of the distill'd waters of Orange-flowers, and Purslain, *an.* ʒ vj. or of the Decoction of the Roots of Grass, and shavings of Harts-horn, ℔ j. strain and press them out. To the straining add Syrup of Lemons, ʒ ij. make two or three, or four Doses of Emulsion, to be tak'n at a good distance from Meals. They will do better being taken in the Wane of the Moon.

Almond-Milks, Butters are easie to make; known to, and made use of by several Ladies, that regard their health, and to keep themselves plump.

The usual way is to prepare them of two ounces of blanch'd-Almonds, which must be stamp'd exactly in a Marble-Mortar with a Woodd'n-Pestle, afterwards dissolv'd in eight or ten ounces of the decoction of barley cleans'd, or in the Water where Veal or Pullets have been boyl'd. Then strain and press the whole, and add to the straining an ounce of fine Sugar, and never so little Rose-water, or if you please, Orange-flower-water. You may add an ounce of Syrup of Violets, Water-Lillies, or White-poppy instead of Sugar if there be occasion.

CHAP. V.

Of Potions, Mixtures, and Bolus's.

POtions are so call'd, because they are to be drank. The Materials of them are very various, by reason of the different Indications, Judgements, and insight of them that prescribe them; for that may be call'd a Potion which is as ill prepar'd, as that which is well prescrib'd, and as well prepar'd. Besides Purgative-Potions are as well to be accompted potions, as those which are accompted Astringent or Cordial, Sudorific, or Diuretic, *&c.* As Potions are not made without liquors; those which are made use of are sometimes simple, as fair Water, Wine, Milk, Whey, *&c.* and sometimes waters distill'd, Infusions, Tinctures, Decoctions, Juices, *&c.* Sometimes several liquors are mingled, one among another. Sometimes also to these liquors are added Powders, Salts, Opiates, Confections, Magisteries, Elyxirs, Oyls, Essences, *&c.* Juleps, Apozems, Emulsions, Almond-Milks, and Diets, may be call'd Potions as well as Medicines. We also prepare Potions Emetick, Diaphoretic, Pectoral, Cephalic, Somniferous, Anodynes, Aperitives, Diuretics, Cordials, Stomachical, Hepatical, Splenetic, Hysteric, Vulnerary, Arthritick, Carminative, Dysenteric, and for several other purposes: So that Potions may be made after a thousand fashions for every Disease, since we may make use of various Remedies and different Doses according to the intention of the Physician.

That which many modern Physicians call *Mixture*, may be reckon'd in the same rank with Potions. But Mixtures differ in this from Potions, that their use is more frequent and longer, and because there is not so much drank of them at a time; for being compos'd of powerful Medicines, they operate in less quantity, and work those effects by repetition, which could hardly be done at once taking. These Mixtures are usually a mixture of distill'd Waters, more or less, compounded of Elixirs, distill'd-Oyls, volatile, fix'd, or Essential Salts, Spirits, Tinctures, Essences, Extracts, pretious Stones,

Syrups, and many other Remedies, well-choſen, and well-proportion'd in their Doſes, which are to be taken from time to time in a little Spoon, in the Intervals between the Patients meals.

The difference of Mixtures may be very great, according to the diverſity and complication of Diſeaſes, and the Judgement of the Phyſicians, that preſcribe them. Mixtures are alſo ſometimes made of a more thick conſiſtency, not much unlike that of ordinary Opiates, which is for the accommodation of ſuch Patients, as cannot take Remedies in Drink. Theſe Medicines may be compos'd of the ſame Medicaments made uſe of in the preceding mixtures, excepting the Liquors, inſtead whereof we put Conſerves or Confections: They are given upon the point of a Knife, or wrapt up in Wafers, or otherwiſe.

Bolus's are internal Remedies, uſually a little more ſolid then Opiates; invented meerly for the benefit of ſuch Patients as cannot indure to ſwallow liquid drinks, or cannot away with their ſcent or taſte. They are alſo profitable to make the beſt advantage for the ſwallowing of certain Medicines, whoſe weight would keep them always at the bottom of the Glaſs, were they mingl'd in liquor, as in ſeveral preparations of Mercury and Antimony: There may be as much diverſity in Bolus's, as in Potions. They make them of Electuaries, Confections, Conſerves, Pulps, Powders, Salts, Oyls, Eſſences, Extracts, Syrups, and an infinite ſort of Medicines, of which there muſt be ſome that are ſolid and dry enough to thicken thoſe that are too liquid, or too ſoft. Bolus's are taken uſually a good while before meals, ſometimes upon the point of a Knife, but generally wrapt up in Wafers, powder'd Sugar, or powder of Liquorice, Fruits roaſted or raw, or ſome confection, or other ſubſtance that prevents the Bolus from being either ſmelt or taſted.

CHAP. VI.

Of Gargariſmes, Maſticatories, and Errhines, or Tents to put up into the Noſtrils.

GArgariſms, are liquid Medicines, deſign'd for Diſeaſes of the Throat, Mouth, Palate, and Gums, as alſo to free the Head from exceſſive moiſture. They are uſually compos'd of diſtill'd waters or decoctions, wherein they mix ſometimes Salts, ſometimes Spirits, Syrups, Honeys, Vinegar, and ſometimes ſeveral Juices. Gargariſms are never ſwallow'd, but only gargl'd and held for ſome time in the mouth, then ſpit out again, continuing the uſe thereof as long and as often as neceſſity requires. Theſe Gargariſms are as well known, and as uſual as any other ſort of Medicine, and there are enough to be found in ſeveral Authours, to ſpare the ſwelling of theſe Sheets.

Maſticatories, are alſo call'd Apophlegmatiſmes, becauſe their chief work is to bring down flegm from the Brain. For which purpoſe we make uſe of ſeveral ſimple Drugs, and particularly of divers parts of Plants, as roots of Orrice, Pellitory of *Spain*, Cyperus, or Engliſh Galenga, true Acorus, or Aromatic-reed, Grains of Staveſacre, Cubebs, Cardamom, all the Peppers, Muſtard, Rocket, Sage, Roſemary, Maſtick, Time, Savory, Tobacco, *&c.* which Medicines being chaw'd, by their heat and acrimony have a peculiar qualitie to draw down flegm from the Brain, and to void it by the mouth. Trochiſques may be alſo made thereof by pulverizing them, and incorporating them with Oxymel, or Syrup of Caſſidony, to hold in the mouth, and to maſticate when they are dry: or elſe to make thereof a kind of paſte, to tye up in a Linnen-Cloth like a knot and ſo to champ them between the teeth.

Errhines are ſo call'd, as being Medicines deſign'd to be put up into the Noſtrils. They were invented for the ſame uſe as Apophlegmatiſmes. But they operate with more force, becauſe they carry their vertue directly to the Brain, through the Conduits of the Noſtrils, and powerfully ſtir up and move the Expulſive faculty. Errhines are ſometimes liquid, and proper to be ſnufft up through the Noſtrils; ſometimes in Powder, to be either ſnufft up, or blown into the Noſtrils; ſometimes like a thin Oyntment, and ſometimes like a Tent ſmall at one end. Liquid Errhines are uſually made of the Juices of Marjoram, Betony, Sage, Roots of Beets, Sow-bread, Orrice, *&c.* Or of

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the Decoctions of the same Plants, or of Lettice, or Lillies of the Valleys. The Powders are made of Marjoram, Betony, Orrice, Nicotian, Oleander, Colts-foot, white-Ellebore, and Euphorbium, upon some extraordinary accompts: Those that are made up in Liniments will admit the same things into their compositions; and must be incorporated with Oyl of Roses or Orrice, and a little wax, or with Oyl of Laurel. The more solid Errhines are chiefly to stop bleeding at the Nose: They are usually compos'd of Balausts, or the Flowers of the wild-Pomgranate-tree, of Bole of the East, *Terra sigillata*, Mastick, and Man's-blood or Swines-blood dry'd; or of some such kind of astringent Medicaments pulveriz'd, and incorporated with the white of an Egg or Down of a Hare, to make Tents thereof to be put up and held in the Nose. Some there are that make an addition of white-Vitriol.

CHAP. VII.

Of Injections, and Pessaries.

INjections are liquid Medicines sometimes injected into the private parts of Nature, and sometimes into wounds: Clysters may be also call'd Injections. The ingredients are different, according to the difference of the Distemper. Wine, Distill'd-waters, Lime-waters, Sea-waters, Spirit of Wine, Milk, Whey, Oyls, Balsoms, and several other Liquors; as also several Juices, and divers Decoctions and Infusions of several parts of Plants, and several Minerals. Usually Syringes are made use of for the application of these Injections, and they must be always warm'd before they be us'd. Sometimes several Ingredients and Preparations are dissolv'd in these Liquors, as Salts, Powders, Extracts, Syrups, Honeys, Trochisques, Gums, Elixirs, and several other things, according as necessity requires. Sometimes also we dip Tents, Feathers and Bolsters into Injections for the cure of Wounds.

Under the name of Pessaries, are comprehended all Medicines not liquid, which are put up into the Secret-parts of Women. But by the word *Pessary*, strictly tak'n, is to be understood a sort of solid Medicine, about a fingers length, sometimes somewhat bigger, which is put up into the Secret-parts with a Riband fasten'd to one end. These Pessaries are made pyramidical, round, close and smooth, for fear of hurting the parts. These Remedies are prepar'd for several purposes; the chief of which are to provoke the *menstruum's*, or to stop them: to hinder the falling down of the *Matrix*, to cure Fluxes against Nature, or to heal Ulcers, or other mischiefs that may happ'n to those parts. The Body of the Pessary is made of some slight polish'd-wood, or some piece of Linnen made up close and hard; cover'd with a kind of Sheath of Velvet, or some other Silk-stuff, the seams whereof cannot hurt. Then fill the Velvet with Cotton or Wool, that it may be as hard as if it were of Wood or Cork; and daub all the outside of the Pessary with some Liniment, or some other mixture proper for your purpose. Pessaries may be also made of Lead, hollow like a little Cane, and cover'd with Velvet, like the former. In all which there must be a difference observ'd between Maids and Women; as well in reference to the hardness, as the bigness of Pessaries, appropriating the lesser and softer to the first.

Aromaticks that are sweet and free from acrimonie are very proper to render Pessaries effectual: whether it be to consume the vapours of the *Matrix*, or to op'n the passages, and to provoke the *menstruums*: For we observe that good Smells seem to comfort that part. For which reason such Liniments where Musk, Ambergrise, Civet, and other good Smells are mix'd, are successfully us'd upon those occasions. Though you must be very careful not to let them come near the Noses of some Persons, upon whom those Sweet-smells would work a contrary effect. The Bodies of Pessaries prepar'd to stop the *menstruum's*, are made up with astringent powders, very finely pulveriz'd, incorporated with Wax and Oyl of Mastick melted together, fill'd into some piece of thin Taffaty, and anointed without-side with the same Oyl. These Pessary's are very good to stop extraordinary losses of Blood, and the falling of the *Matrix*. If the Pessaries are design'd for the cure of any Ulcer, or any other disease in the neck of the *Matrix*, the Pessary must be anointed with some Linament or convenient Medicine in that part which is most able to reach it.

CHAP. VIII.

Of Clysters, and Suppositories.

CLysters, call'd by the *Greeks Enemata*, are also Injections, and liquid Medicines, injected through the Fundament into the Intestines, for the cure or ease of several Maladies. They are call'd Clysters or Washings, because their use is to wash the Intestines.

Clysters are prepar'd for several purposes, sometimes to cool the Intestines, sometimes to moist'n them; sometimes to soft'n and soak the harden'd excrements, or to stir up the expulsive Faculty, to dispel the wind, to assuage pains, to facilitate the Expulsion of the Urine, to draw forth or kill the Worms, to ease Women in Labour; to provoke their *menstruum's*, and to appease Hysteric-passions, to assuage tormenting Gripes, and to make a diversion of Humours or Vapours, which flie to the Head, Stomach, Brest, Reins, or any other parts of the Body.

Clysters are usually compos'd of the Decoctions of Roots, Herbs, Seeds and Flowers, of different vertue, according to the intention of the *Physician*. The Decoctions are for the most part made in fair Water, but many times in Milk, Whey, Meat-broths, ordinary *Spanish*-wine, Urine, Oxycrat, Hydromel, and several other Liquors. And besides the ordinary Roots and Flowers, which are boyl'd for Clysters, many times there is an occasion to mixe Laxatives, such as are Senna, Coloquintida, Rhubarb, and many others, and to dissolve therein the Strain'd-decoctions of Opiats, Honeys, Syrups, Sugar, Salts, Yolks of Eggs, Turpentine, Oyls, Extracts, and many other things, which it would be too tedious to repeat. The forms of Clysters are so familiar, that it is to no purpose to insert them.

Suppositories are solid Medicines about the length and bigness of the little Finger, round and pyramidical. They were invented for the convenience of those who have an aversion to Clysters, or of such whose Sickness and constitution will not admit of them. The ordinary ingredient of Suppositories is Common-honey, Bay-salt, Salt-gemme, or Aloes, or Coloquintida in powder, or some Hiera, or Laxative Electuary. Sometimes Suppositories of Sope cut round and small at the end will suffice. Some there are that make use of Muscardins, or bits of Paste made of Gum-Tragacanth, Rose-water and Musk. So that in these things every one is at liberty to make choice of what he likes best.

CHAP. IX.

Of Wines.

ALL the World knows that the Grape is the Fruit of the Vine; and that Wine is the Juice of the Grape; but this Juice would not be true Wine, did it not undergo a Fermentation; and if the subtle parts had not by that means been separated from the grosser, and by that means were not become capable of operating as they do: Not that their Fermentation gives to the subtle parts of the Wine their utmost purity. For that requires other means, as you shall hear in the third part of this Work; and therefore I shall here at present only describe the preparation of two sorts of Wine most in use, the first of which may serve as an Example how to prepare any other.

Vinum Absinthii.

℞. *Summitat. floridarum siccarum Absinthii majoris vel minoris* Fasc. j. *Incide & immitte in doliolum, quod pintas Parisienses quinquaginta aut circiter contineat. Impleatur dolium succo Racemorum recenter expresso, & reponatur in Cella vinaria ad fermentationem, qua peracta, quod per fermentationem deperditum est Vino suppleatur, & diligenter dolio obturato, servetur Vinum.*

Wormwood-Wine.

℞. Of the Flowrie drie-tops of the bigger or lesser Wormwood, *Fasc. j.* Shred them and put them into a little Vessel containing fifty pints of *Paris*, or thereabouts. Fill the Vessel with the Juice of Vine-clusters newly pres's'd forth, and set the Vessel into a Wine-Cellar to ferment. The Fermentation being over, supply the waste of the Fermentation with Wine: then carefully stopping up the Vessel, keep the Wine.

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They that can endure the bitterneſs of Great-Wormwood, may make choice of it for the preſervation of this Wine: But the nicer ſort chooſe the little, whoſe vertues are no leſs then thoſe of greater. Take the Flowerie-tops, and having weigh'd out the quantity preſcrib'd, ſhred them and put them into a little Bag, which is to be ſo faſten'd to the bung-hole, as to hang in the midſt of the Liquor. Place the Veſſel in the Cellar, fill it with the Juice of cluſters newly ſqueez'd, and let it ſtand for two months, during which time the Wine will ferment and be fully charg'd with the ſmell, taſte and vertues of the Wormwood. When the Ebullition of the Wine is over, fill up with white-wine, burnt-wine, or *Spaniſh*-wine the waſte of the Fermentation: Then ſtop up the Tub, and keep the Wine for your uſe.

The Juice of the New-gather'd-grapes is to be preferr'd before all ſorts of Wine, for the preparation of Wormwood-wine, and of all compound Wines; becauſe that Juice being newly ſqueez'd forth, by ſubtilizing and diſengaging it ſelf from its terreſtrial parts by Fermentation, penetrates more inwardly the ingredients which are put into it; and operates more effectually then a wine could do already fermented, whoſe ſubtle parts are ſubject to diſſipation. For this Juice loſes nothing to ſpeak of in its Fermentation with the Wormwood; but the ſame flegm which the ordinary wine loſes in its own. And in the mean time by means of the heat which the Fermentative-ſpirits excite in it, it is better able to penetrate the body of the wormwood, and to charge it ſelf with its vertue, then otherwiſe it would be. By this means alſo it may be kept a long while, provided the Veſſel were full and cloſe ſtopt.

Wormwood-wine is very much commended againſt the Diſeaſes of the Stomach and Liver, eſpecially proceeding from a cold cauſe. It diſſipates wind and crudities, it helps and increaſes the appetite, kills worms, reſiſts putrefaction; helps concoction and diſtribution of the nouriſhment, and conſumes bad humours. It brings down the vapours that riſe from the *Matrix*, and op'ns its obſtructions, and is very proper for the Green-ſickneſs, and to provoke the *menſtruums*. Take three or four ounces in a morning faſting, for ſeveral days, as you find it requiſite.

Vinum Stibiatum, vulgò Emeticum.

℞. *Vitri aut Reguli Antimonii, vel ſi lubet, Croci Metallorum, aut Magneſiæ Opalinæ ſubtiliſſimè pulveratorum, ℥ iij. Vini Hiſpanici aut Vini albi generoſi pintas duas Pariſienſes. In Lagenâ Vitreâ ſimul collocentur, probèque obturato vaſe in loco temperato per octiduum macerentur, & ſæpius agitentur, ſimulque tandem ſerventur, ut uſus tempore Vinum Clarum Antimonium ſupernatans, per inclinationem effundi & ſumi poſſit.*

Stibiated wine, vulgarly Emetic; *or apt to provoke vomiting.*

℞. Of Glaſs, Regulus of Antimony, or if you had rather, Crocus Metallorum, or Magneſia Opalina, finely powder'd ℥ iij. *Spaniſh*-wine or ſtrong *French*-white-wine two *Paris*-pints: Put them together in a Glaſs-bottle, and the Bottle being carefully ſtopp'd, let them macerate eight days in a temperate place, and let them be oft'n ſtirr'd; and at length let them be all kept together, that when it is to be us'd, the clear wine that ſwims above the Antimony, may be pour'd forth by inclination, and ſo tak'n.

Having Glaſs or Regulus of Antimony, or Magneſiâ Opalina, well prepar'd and finely beat'n upon a mortar, it is an eaſie thing to prepare *Emetic*-wine. For it is ſufficient to get a good Glaſs-bottle, and to put the prepar'd Antimony into it, and to pour the preſcrib'd quantity of wine into it, then to ſtop up the Bottle, to ſet it in a temperate place, to ſhake it from time to time for ſeven or eight days together, and to keep the wine and the Antimony together in a Bottle well-ſtopp'd, to make uſe of as occaſion ſerves, pouring out by inclination, and taking the clear wine that ſwims above the Antimony, to ſuch a quantity as is requiſite; taking care not to raiſe the bottom, for fear ſome part of the Antimony ſhould mixe with the wine. Upon which this obſervation is to be made, That the preſcrib'd doſe of wine and Antimony need not be too religiouſly obſerv'd. For though there ſhould be a little more or a little leſs of the one or of the other, it would not ſignifie much, ſince oft'n Experience teaches us that the wine takes to it ſelf no more of the vertue of the Antimony, then it is able to receive; and that the lying with the Antimony one, two or more months, as the wine might do, renders it nothing more ſtrong then that which has lain but eight days, if it be oft'n ſhak'n.

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You ſhall obſerve alſo that the ſame powder of Antimony, upon which the wine has ſtaid a long time, and which has imparted its Emetic and Purgative Quality to it, is ſtill able to impart as much vertue to more new wine, if macerated with it, and that after that wine is ſufficiently ſtrong of the Antimony, and ſpent, the ſame Powder will ſerve again ſeveral times for the ſame uſe. And that if you be but careful always to pour out the wine gently, and to take always only the clear, you ſhall find very near the ſame weight of the powder as at the firſt maceration; which is more confirm'd by the trial which we make of Cups of Regulus of Antimony, which will give a Purgative and Emetic Quality to the wine, which ſhall be fill'd and kept in them but for ſome few hours: and then again bequeath the ſame vertues to new wine in the ſame ſpace of time, and will ſtill afford the ſame qualities to other wine, as long as the life of one, or ſeveral men continues to make tryal of it, without perceiving in the Cup any diminution of its weight or vertue.

Emetic Wine purges upwards and downwards ill humours, eſpecially thoſe that are bred in the Stomach. It operates with more or leſs violence according to the conſtitution of thoſe that take it, or according to the ſuperfluity or ſmall quantity of matter which it meets with. And therefore it is much more proper for perſons that are full of humours, then for thoſe that are not ſo much troubled with them, and it is better at the beginning then at the end of a ſickneſs, when the Patient is weak. It may be given alone from one, to two, three, or four ounces, a good diſtance before Meals, according to the Age, Strength, and Nature of the Diſeaſe. It may be mingled alſo among Purgatives. Where note, that if the Purgatives are too ſtrong and exceed in quantity the Emetick-wine, then it acts as they act, and works only downwards. But if it ſurmount the Purgatives in quantity and ſtrength, it conſtrains them to work as that does, upwards and downwards.

Emetic-wine is never giv'n to thoſe that are narrow-Cheſted, nor to thoſe that are hard to vomit, or if there be any fear of any Inflammation of the Bowels.

CHAP. X.

Of Vinegars.

WE may ſay of Vinegar, that the firſt Original of it is the Juice of Grapes, as well as of Wine. But the Juice of the Grape muſt be made Wine by Fermentation before it can be turn'd into Vinegar. And though Vinegar may be made of Beer or Cider, as alſo of water; I hold, that good and true Vinegar is only to be made of Wine. Some attribute the only cauſe of the acidity of Vinegar to the diſſipation of the volatile Spirits of the Wine. But it ſeems that they have not ſufficiently examin'd this buſineſs. For they that know the Nature and Original of acids, and the effects which they are able to act upon Salts and Spirits, eſpecially upon volatiles, will as much attribute to them the turning of Wine into Vinegar, as to the abſence of the volatile Spirit of Wine. For although before this alteration, ſome part of the Spirit of Wine may chance to be diſſipated, yet we are to believe, that the corruption which happens to wine, happens through the diſproportion of its parts, and that the exceſs of the acid is the chief cauſe of turning wine into Vinegar. For ſo long as the flegm, the volatile and tartarous parts which contain the acid, keep nigh a juſt proportion together, the Wine continues good. But when any one of thoſe parts predominates, there muſt of neceſſity happen ſome corruption, which proves to be more or leſs according to the Quantity and Nature of the part which predominates, which cauſes very great differences in the decay of the Wine. For when the Wine decays through exceſs of flegm, it grows greaſie, and turns. But though the flegm be able to enervate the force of the volatile part of the Wine by its own corruption, and by its exceſs, it cannot nevertheleſs deſtroy it, as it deſtroys almoſt entirely the tartarous acid part. Whence it comes to paſs, that though no good Vinegar can be made of Wines grown greaſie, and turn'd; Yet in Diſtillation you may draw from hence as much volatile Spirit, as from Wines neither greaſie nor ſowr. And you might draw from hence altogether quite as much, but that the abundance of flegm, which caus'd the corruption of the Wine, in part takes up the place of the volatile Spirit. The exceſs of the volatile Spirit happ'ns very rarely to Wine, and though it ſhould exceed the other parts in quantity,

quantity, as it is very able to preſerve it ſelf without them, it would never corrupt them, but would make the Wine violent and reaking, ſo that it would be leſs ſerviceable for common uſe, and would intoxicate ſooner: But when the Tartarous part ſurmounts, it draws to it the nitrous part of the Air, which is in ſome ſort Homogeneous to it, and multiplying it ſelf by a little and a little, inſtead of chaſing away the volatile Spirit, which it has ſurmounted in quantity, it unites it ſelf ſtrictly to it, to make it in ſome meaſure conformable to its own Nature, while the flegm is no longer able to temper the acid which has got the upper hand of it. Vinegars by their acidity ſlack'n the activity of the Salts, and volatile Spirits; joyning themſelves to them, and altering their action; and are ſucceſsfully made uſe of in Diſtempers caus'd by the Salts, and volatile Spirits, or by humours that participate of their Nature, chiefly Choleric humours, to which purpoſe acid Fruits and Juices are uſually adminiſtred with good ſucceſs.

Acetum Roſatum.

℞. *Roſarum Rubrarum exungulatarum Siccarum,* ℔ j. *Aceti acerrimi,* ℔ viij. *Vaſe Vitreo bene obturato excipiantur per quindecim aut viginti dies inſolentur; deinde colentur & exprimantur. Colatura cum pari Roſarum Pondere in eodem vaſe iterum per idem tempus inſoletur, coletur & exprimatur, & ſervetur acetum.*

Vinegar of Roſes.

℞. Of dry red Roſes, the white being nipt off, one pound; of very tart Vinegar, ℔ viij. Put them into a Glaſs-Veſſel well ſtopp'd; ſet them in the Sun for fifteen or twenty days, then ſtrain and preſs them out. Let the ſtraining be again ſet in the Sun during the ſame time, with the like weight of Roſes. Let it be ſtrain'd and preſs'd out, and let the Vinegar be kept.

Take the great buds of *Provence*-Roſes, and cut away the white part at the bottom. Dry the red part in the hot Sun, if it may be done, at leaſt in the Air, as ſoon as poſſible may be. Take a pound of Roſes thus dry'd, and put them into a ſtrong glaſs-bottle; upon which you muſt pour eight pints of good Vinegar, and having ſtopt the bottle, expoſe it to the Sun for fifteen days or three weeks; then ſtrain and preſs out the whole, and return the ſtraining to the ſame Veſſel, over a pound of freſh Roſes; then ſtop up the bottle, and expoſe it to the Sun as long as before: then ſtrain the Vinegar and ſqueeze the Roſes, and keep the Vinegar for your uſe. You may, if you pleaſe, leave the Roſes in the Vinegar, and ſtrain it only when you have occaſion for it.

Vinegar of Roſes is as much us'd in Dyet, as in Phyſick. It cuts, cleanſes, tempers, it gives an appetite, it provokes ſleep being apply'd to the Fore-head, it removes the Acrimony of the fix'd Salts, it moderates the activity of the volatile, it kills the Worms, ſtays Vomiting, ſtays the Operation of Purgatives, cools Inflammations, aſſiſts Expectorations, and looſens Flegm, ſtops the Piles being taken inwardly, and applied outwardly; reſiſts Putrefaction, and is good to ſmell to in noiſome and Peſtilential ſeaſons. It is mix'd among ſeveral Liquors, as alſo in Liniments, Unguents and Emplaiſters.

Vinegar of Roſes may ſerve as an example for the making of ſeveral Vinegars, made of Flowers, as of Elder, Gilli-flowers, Roſemary, Sage, Marigolds, *&c.* But becauſe theſe flowers do not abound ſo much in moiſture as the Roſe, you may take the pains to dry them, or at leaſt to half-dry them, not to diſſipate their good parts.

Acetum Scilliticum.

℞. *Scillas duas molis mediocris, quarum corticem externum, & cor medium cultro Arundinaceo eximes, Laminas inter cor & Corticem exiſtentes in partes divides, & ſoli per multos dies ad humidi ſuperflui conſumptionem expones. Harum* ℔ j. *in lagenam capacem immittes, illique ſuperfundes Aceti Albi Acerrimi, vel potius Spiritus Aceti,* ℔ viij. *Lagenam obturabis, & per quadraginta dies radiis Solaribus expones. Colatis deinde, & expreſſis Laminis, Acetum ſervabis ad uſum.*

Vinegar of Squills.

℞. Two Sea-Onions of an indifferent bigneſs, peel off the outward Rind, and take out the heart with a knife made of a Reed; the thin ſlices between the outmoſt skin and the heart divide into parts, and expoſe them for many days to the Sun, till the ſuperfluous moiſture be conſum'd. Of thoſe put a pound into a large ſtone-Jug, and pour upon them eight pints of very ſharp White Vinegar, or rather Spirit of Vinegar. Stop the Jug, and ſet it in the Sun for forty days. Then having ſtrain'd and ſqueez'd the thin ſlices, keep the Vinegar for your uſe.

They that have travelled into *Spain* and *Portugal*, have there met with two ſorts of true Sea-Onions, one of which being white, is call'd the Male; the other being red is call'd the Female. The white is uſually ſomewhat the leſſer: it is in taſte like the red one, but a little thought more tart: However the vertues of both are the ſame. Theſe Squills are Onions that grow by the Sea-ſhore, the Root whereof is large, ſhort, cloſe, and bended. In the Months of *Auguſt* and *September*, they put forth a round, ſleek, ſhining ſtalk altogether bare, of a whitiſh colour enclining to Grideline, as big as a Man's finger, about two Cubits high, ſurrounded at the top with ſeveral little white-flowers enclining to purple, growing like an Ear; after which follows a black-ſeed like that of ordinary Onions which is ripe in *October* and *November*. The leaves of both Squills are like thoſe of a Flower-de-luce, but bigger; they begin to ſprout forth in *November* and *December*, and grow dry and die in *May* or *June*. The white is accounted better then the red becauſe of the colour.

The drying of the ſlices was only intended to correct any ill quality which may be in them; for as much as all that is diſſipated by the Sun, is only a ſuperfluous moiſture, void of any conſiderable vertue; and therefore care is tak'n to prevent that ſuperfluous moiſture from taking away the ſtrength of the Vinegar, and cauſing it to putrifie, in regard there is flegm enough in the Vinegar without having any need to multiply it.

Dioſcorides and *Matthiolus* moſt highly applaud the vertues of Vinegar of Squills, and affirm that by taking three ounces every Morning, two hours before any eating, and taking a little walk after it, it will preſerve a Man many years in perfect health. That he ſhall never have any Diſeaſe in Mouth, Throat or Stomach. That he ſhall have a voice always clear and clean, reſpiration free, quick ſight, hearing good, an excellent complexion. That he ſhall be free from Windineſs: That all the parts of the body ſhall do their Offices: That he ſhall be always fit for buſineſs, never have an ill breath; ſhall digeſt whatever he eats, and turn it into good nouriſhment, and have a kindly evacuation of the Excrements. That it will recover the Pthyſical, though far gone; very much help the Epileptic, abating the effects of the Diſeaſe, and quite taking them at length away, if the Diſeaſe be new. That it will give eaſe in the Gout, and diſeaſes of the Joynts; open obſtructions of the Liver, Spleen, Meſentery, and other parts: and in ſhort will procure ſoundneſs of health, and a prolongation of Life. But becauſe our Phyſicians ſeldom preſcribe this Vinegar, I have not made Tryals enough to confirm what thoſe great Men have writt'n.

Acetum Theriacale.

℞. *Radicum Angelicæ,*
Valerianæ Majoris,
Meu Athamantici,
Imperatoriæ,
Gentianæ,
Vince-toxici,
Carlinæ,
Zedoariæ,
Tormentillæ,
Biſtortæ, an. ℥ j. ß.
Cortices Citri ſicci,
Seminis ejuſdem,
Baccarum Juniperi,
Cardamomi minoris,
Cubebarum, an. ℥ j.
Foliorum Rutæ,
Scordij,
Dictamni Cretici,
Cardui Benedicti,
Centaurii minoris,
Florum Aurantiorum,
Roſarum rubrarum, an. M j.

Radices & Semina Contuſa cum foliis inciſis excipiantur Lagena Vitrea ſatis ampla, illiſque ſuperfundantur Aceti Acerrimi vel potius

Treacl'd Vinegar.

℞. Of the Roots of Angelica,
the bigger Valerian,
Athamantic Spignel,
Maſter-wort,
Gentian,
Swallow-wort,
Carline-Thiſtle,
Setwall,
Tormentill,
Snake-weed, *an.* ℥ j. ß.
Rind of dry Citron,
Seed of the ſame,
Juniper-berries,
Leſſer Cardamoms,
Cubebs, *an.* ℥ j.
Leaves of Rue,
Water-Germander,
Cretan Dittany,
Carduus,
Leſſer Centaury,
Orange-Flowers,
Red-Roſes, *an.* M j.

The Roots and Seeds being cut, put them into a Glaſs-bottle, large enough and pour upon them twelve pints of the moſt ſharp

potius ſpiritus Aceti ℔ *xij. Obturetur Lagena, & per dies duodecim radiis Solaribus exponatur, ſæpius agitando; poſtea colentur & exprimantur omnia, ſerveturque Acetum ad uſum.*

Vinegar, or rather Spirit of Vinegar, and expoſe them to the Sun twelve days, oft'n ſtirring them: then ſtrain and ſqueeze out the ingredients, and keep the Vinegar for uſe

The Compoſition of this Treacled-Vinegar is a mixture of the vertues of ſeveral choice Medicines, really Theriacal, and able to furniſh the Vinegar with all the good qualities expected from it. And to facilitate the preparation, I have thought fit to give a brief Deſcription of the Medicaments, in the choice whereof there may be ſome doubt.

Authors deſcribe ſeveral ſorts of Angelica, of which the two principal are, the *Bohemian*, and that which grows upon the high Mountains of *France*, *Spain* or *Italy*. Some prefer the *Bohemian*; but that may be more for the rarity of it then for any vertue extraordinary above that of our Mountains; the ſtalk whereof is above a Cubit in height, knotted in ſeveral parts, hollow and having many Branches; the Leaves long and dented, the colour dark-green, with ombels of white Flowers: The root is large, round, about a foot in length, divided into parts like a beard; white within, and ſomewhat dark without. The Seed is large and flat: It is of a thin ſubſtance; of a ſmell and taſte very Aromatic. The Great Valerian grows in the Mountains of *Pontus*, as alſo upon ſome Mountains of *France*. It has a ſoft, broad, ſmooth Leaf, very jagged. The Stalk is ſmooth, ſoft, hollow, inclining to red, ſomewhat knotted, about two Cubits high. The Flowers are ſmall and white, inclining to purple, and growing in Tufts. The Root is half creeping, as big as a man's finger, having of each ſide and all a-long the lower part ſeveral little white Roots that run into the Earth. The taſte is very Aromatical, and the ſcent piercing, and much like that of Nard.

Meum or Spignel, call'd *Athamantic*, from the Mountain *Athamas* in *Theſſalie*, where it grows very plentifully, abounds alſo upon ſeveral Mountains of *France*. The Leaves are ſmall and long like thoſe of Aniſe. The Stalk is about a Cubit high, or ſometimes more, with ombels of flowers at the top. It hath ſeveral Roots pack'd together, black without and white within, as big as a Man's little-finger, cover'd towards the bottom with a kind of hairy excreſcence like the ſtalk of Sea-holly. It is of a thin ſubſtance, but of a ſmell and taſte very Aromatic.

Imperatoria grows upon the high Mountains of *France*, *Italy* and other parts. The Leaves are broad, ſomewhat pointed, indented and jagged, growing from the Root by three and by three, at the end of a long tayl: They are ſtrong and rough to handle, as is alſo the ſtalk, that inclines ſomewhat to red, being about two Cubits high. The Flowers are white and in ombels. The Seed in ſhape, taſte and ſmell is very like to the *Seſeli*, or Hartwort of *Marſeilles*. It has ſeveral roots, which are neither very long nor big, lying on the ground, knotted, dark-colour'd and rugged without, ſomewhat green within, of a ſharp taſte, thin ſubſtance and very Aromatical ſmell.

Gentian grows upon high Mountains in moiſt places. The Leaves are large, broad, and inclining to red, ſomewhat reſembling the leaves of Plantain; but much more like to white Ellebore. The Stalk about the bigneſs of a man's finger, is very ſmooth, five or ſix foot high, and parted by knots; whence ſpring forth leaves by two and two, leſs then thoſe which are next the root. The Flower is yellow, the Seed flat and ſmooth; the Root very much like that of Marſh-mallows; but much bigger and thicker. It is alſo very yellow and very bitter.

Swallow-wort grows uſually in Mountainy-places; the ſtalks are about a cubit high, ſmooth, round, limber, and difficult to break. The leaves are dark-green, long, pointed at the end, ſomewhat like thoſe of Ivy. The Flowers are white, ſmall, and ſtinking. After which ſucceed round, long knobs full of red-ſeed, ſomewhat broad and downie, in ſhape like a Swallow. The Roots are ſmall and odoriferous, and very much commended againſt Poyſons.

The Carline-Thiſtle grows upon high Mountains. The Leaves are large, broad, rough, prickly, pointed, diſplay'd, and extended like branches. It has no ſtalk, but lies upon the ground, producing a little above the Root a round, hoary, prickly head; that ſpreads into a large Flower of a yellow colour. The Root is about the bigneſs of a Man's fiſt, and ſomewhat more: it is about a foot long, and runs directly into the ground. It is ſomewhat dark colour'd without, and white within, of an indifferent ſubſtance. The taſte is not diſpleaſing, inſomuch that the Countrey-People feed upon it. The ſmell is very Aromatic.

The Plant of Zedoary is not deſcrib'd by Authors, yet the Root is very much in uſe. It is ſomewhat inclining to red, a little flat, as long and as thick as a Man's little finger, having a kind of reſemblance to ginger, but leſs knotty. The taſte is a little bitter, but Aromatical. It is commended for a great Cordial, and good againſt Poyſon.

Tormentil call'd *Heptaphyllon*, becauſe that the Leaves grow ſev'n and ſev'n together, has ſeveral creeping-ſtalks, round and ſmooth. The Leaves like thoſe of *Cinqfoyle*. The Flowers yellow, but very ſmall. The Root ſhort, as big as the little finger, black without, red within, environ'd with ſtrings; the taſte is aſtringent, and the ſmell ſomewhat Aromatic.

Snake-weed grows generally in the Mountains; the Leaves are long, fibrous, and like thoſe of the leſſer Dock. The upper-part is dark colour'd and ſpotted: the Stalk is not very big, thruſting forth ſome kind of Leaves at the top, which is beſet with little Purple-flowers in the form of a Spike, being about a cubit in length. The Root is red within, dark-colour'd without, beſet with little threads; of a very compact ſubſtance; in taſte and ſmell like that of Tormentil.

The Leſſer-Cardamom is eſteem'd the beſt. We have no Deſcription of the Plant that produces it, no more then of the other Cardamoms. The form of the Cod of the Leſſer is triangular, reſembling that of the Fruit of Ben. The Seeds are ſet in order and well-crowded into the Cod, within a little as big as thoſe of *Amomum*, of a purpliſh colour, ſeparated by little membrains, and filling all the Cod. Their taſte is biting and very Aromatic.

The Plant of Cubebs is not well known yet: we believe it to reſemble black-Pepper, and that it creeps up and ſupports it ſelf upon Trees that grow next to it. They grow in *Java*. The Seeds of Cubebs are cluſter'd together like thoſe of Ivy, but they have a little tail which black-Pepper has not. Their taſte is biting and Aromatic. You muſt cut off the tail with a pair of Sciſſers, and throw it away.

The true Dittany is no where to be met with but in *Candy*, upon the Mountain *Ida*. It has many ſtalks very ſmooth and woollie, as alſo are the Leaves, by reaſon of the cotton that covers them; they are of a round figure, about the bigneſs of the Nail; the Flowers are purpliſh, and like our ordinary Violets. They are intermix'd with the Leaves, eſpecially at the top of the ſtalks like thoſe of *Scordium*. Which I affirm to be true, as having oft'n had the real Dittany in flower, contrary to the opinion of ſeveral Writers, who affirm that Dittany never flowers: For which they may be excus'd, as having never ſeen any Dittany, but what was gather'd before the Dittany came to be in flower, and conſequently took it to be always the ſame. And I believe it is for the ſame reaſon that you ſhall never find the Flowers but only the Leaves of Dittany preſcrib'd by *Phyſicians*, which in my opinion are not to be rejected; nor are they to be ſeparated from the Leaves, no more then thoſe of *Scordium*, Calamint, Germander, Ground-Ivy and other Aromatical Herbs. The Roots of Dittany are very numerous, ſmall-cluſter'd together, dark-colour'd without. They are accounted good for nothing: the Leaves and Flowers are very Aromatical in taſte and ſmell.

All the Simples in this compoſition of Vinegar muſt be put in drie. You muſt bruiſe the Roſes, Citron-rinds, and all the Seeds or Berries; you cut muſt the Herbs, and put them all into a large ſtrong Glaſs-bottle, and pour out upon them twelve pints of excellent Vinegar, ſtirring the Ingredients, ſo that they may be equally ſteep'd in the Vinegar. Then ſtop up the Bottle, and expoſe it to the Sun for forty days; at the end whereof ſtrain and preſs out the Ingredients, and put up the Vinegar in a Bottle cloſe-ſtopp'd.

The vertues of this Vinegar are extraordinary, eſpecially againſt the Peſtilence and in all contagious and Epidemic Diſtempers. It is very good to reſiſt Poyſon and contagious Air, and to cure the bitings of venemous Beaſts. It reſiſts putrefaction and kills the Worms. It cuts and attenuates thick matters, and helps digeſtion. It is adminiſter'd both inwardly and outwardly. The doſe of it is one or two full Silver-ſpoons full in Wine, Broth or any other convenient liquor. It is mingl'd in Potions, and alſo in liquid Epithems. It is put up into the Noſtrils, apply'd to the Temples, to the Stomach and Wriſts. It may be dipt in a ſpunge, and carry'd in a little Box with holes in it to ſmell to in ſickneſs-time, or againſt any ill ſcents.

Acetum Febrifugum, ſive Aqua Prophylactica *Sylvii de le Boe.*

℞. *Radicum Petaſitidis,* ℥ ij.
Angelicæ,
Zedoariæ, an. ℥ j.
Foliorum Rutæ Hortenſis, ℥ iiij.
Meliſſæ,
Scabioſæ,
Calendulæ, an ℥ ij.
Nucum jugland. immaturar. inciſarum, ℔ ij.
Pomorum Citriorum recentium inciſ. ℔ j.

Contundantur prius Radices, deinde cum reliquis omnibus in Aceti diſtillati ℔ *xij. per noctem macerentur, poſtea lento igne cinerum fere ad Pharmacorum ſiccitatem diſtillentur, prolectúmque Acetum in Lagenis Vitreis aſſervetur.*

The Fever-vanquiſhing Vinegar, or water for prevention of Sylvius de le Boe.

℞. Of the Root of Butter-Bur, ℥ ij.
Angelica,
Zeodoarie, *an.* ℥ j.
Leaves of Gard'n-Rue, ℥ iiij.
Baume
Scabious,
Marigolds, *an.* ℥ ij.
Green-Wall-nuts cut, ℔ ij.
New Pome-Citrons ſlic'd, ℔ j.

Bruiſe the Roots firſt, then with the reſt of the ingredients, let them macerate all night in xij. pints of diſtill'd Vinegar. Then let them be diſtill'd with a gentle fire of embers till the ingredients be almoſt drie; keep the Vinegar ſo gotten, cloſe ſtopp'd up in Bottles.

The Butter-Bur grows in moiſt places in Mountains: in the Spring-time it puts forth a tender ſtalk, hollow and pithie, about a Palm and half high; having at the top ſeveral flowers, ſmall and cluſter'd like thoſe of Olives, ſomewhat pyramidical and fair to the ſight: the Leaves come forth after the ſtalk is fall'n. They are faſten'd in the middle to a long tail about a cubit long, thick and full of pith. They hang like a hat turn'd the wrong way: they are large and round, and ſomewhat whitiſh underneath; upon one ſide cleft to the very middle; which cleft coming to cloſe, makes the Leaf reſemble a Champinion upon its ſtalk. The Root is large, dark-colour'd without and white within, of a bitter and unpleaſing taſte, and a ſtrong and unſavoury ſmell.

The Roots being well-ſcrap'd muſt be well-bruis'd in a Marble-mortar with a wood'n-peſtle among the green Wall-nuts, Citrons and chopt Herbs; then put them into a Glaſs-cucurbit of a ſufficient bigneſs, and pour upon them xij. pints of good Spirit of Vinegar that did not yield above three pints at a diſtillation: then fit and lute on a head upon the Cucurbit and leave the ingredients in digeſtion all night, and the next day diſtil them with a moderate fire of embers, till the Ingredients are drie; taking care that they do not burn at laſt; and you ſhall have a Diſtill'd-vinegar as clear Water.

Sylvius the *Dutchman* extols this Vinegar for the cure of all ſorts of Agues, as well intermitting as continual. He would have the patient mix it in his ordinary drink, in Diſtill'd-Waters, in Apozemes, in Mixtures, Potions, Broth, *&c.* It provokes very gentle Sweats, it qualifies and takes off the acrimonie of the Choler, it quenches thirſt, corrects the bitterneſs of the mouth, and ſtays vomiting. It is very much commended againſt the Peſtilence, and in all Epidemic-diſeaſes. It may be alſo put up the Noſtrils, apply'd to the Temples and Wriſts; or be dipt in ſpunges to be ſmelt to for the comfort of the Noble-parts.

This Vinegar muſt not be us'd in Diſeaſes occaſion'd by Acids; for there you muſt have recourſe to the fix'd or volatile Salts.

CHAP. XI.

Of Robs.

THE *Arabick* word *Rob*, which the Modern ſtill retain was giv'n to the Juices of Fruits depurated, and boyl'd to the conſumption of two Thirds; or rather to the conſumption of three Fourths of their moiſtures. The Name of *Sapa* is given particularly to the Juice of Grapes depurated and boyl'd after the ſame manner. And therefore there was no ground for them that would make the Name of *Sapa* common to all

Robs.

Robs. For though the *Sapa* be in effect a *Rob*, yet we acknowledg for a *Sapa* no other *Rob* then that of the Juice of Grapes. *Defrutum*, is a diminutive of *Sapa*; being only depurated and boyl'd to the conſumption of the third part. And is properly that which we call Burnt-wine. It might be an eaſie thing to prepare Robs of the Juices of ſeveral Fruits depurated; but conſidering that it is not for *Apothecaries* to trouble their Shops with Remedies little in uſe, it ſhall ſuffice to ſet down the moſt neceſſary.

A Rob, or Simple Sapa.

℞. *Succi recentis Uvarum albarum perfectè maturarum* ℔ *xxx. Coque igne lento in vaſe fictili vitreato, vel in Aheneo, ſtanno intus obducto, donec tertia tantum pars ſucci ſuperſit. Si vero Defrutum optaveris, ad tertiæ tantum partis conſumptionem coque.*

℞. Of the new Juice of white Grapes perfectly ripe ℔ xxx. Boyl it over a gentle fire in an Earth'n-glaz'd-veſſel, or a Copper-veſſel tinn'd within, till the third part of the Juice only remains. But if you deſire a *Defrutum*, boyl it only to the conſumption of the third part.

You muſt not expoſe the Juice of the Grapes to the Sun, nor uſe any artifice to purifie it before you ſet it upon the fire, to make a *Rob* or *Defrutum*. But on the contrary you muſt avoid it, becauſe that Depuration would never come to paſs without the Fermentation of the Juice, whereby it would change its nature and become Wine, and would loſe all its volatile Spirits in boyling. Whereas by avoiding Fermentation, thoſe Spirits are no-where ſettl'd or concenter'd; ſo that while they are upon the fire there exhales nothing but a groſs and unuſeful flegm. Which may ſerve for an *Item* to thoſe, who preparing the *Defrutum* or *Sapa*, may be ignorant of the reaſons why we take the Juice of Grapes newly preſs'd out, and not the good Wine, which becauſe it is more pure, they might probably think proper to be preferr'd before the new Juice.

The Juice of Grapes is differently boyl'd in *Languedoc*, *Provence*, and other places, for ſometimes they only boil it to a *Defrutum*, and call it burnt-wine. Sometimes they continue and boyl it to the conſiſtency of a *Sapa*, which comes near the ordinary Syrups: ſometimes till it be as thick as ſoft Electuaries, and this they call *Raiſiné*, or the Grape-Confection, and uſe in the conditing ſeveral Fruits. In all which things they thus proceed.

They take a good quantity of white Grapes perfectly ripe, take out the ſtones, ſqueeze and preſs out the Juice in a clean cloth. Then for example they take about thirty pints of this Juice, putting it at the ſame time into a great Earthen Veſſel well-glaz'd, or in a Cauldron, or Copper-Baſon tinn'd within ſide; and ſetting the Veſſel upon a moderate fire, they cauſe the Juice to boil ſoftly till the third part be conſum'd, which is the boyling allow'd to burnt-wine. Then they take the Veſſel off from the fire, and ſtir the burnt-wine continually with a ſtick till it be quite cold; which they do to evaporate ſome ſuperfluous humidity, which might remain in the burnt-wine. Then they cover the Veſſel, and letting it ſtand till the next day, they pour forth by inclination the clear liquor into a proportionable Veſſel, leaving the ſettlement at the bottom. Then they ſet the Veſſel in the Cellar for ſix or ſeven weeks, to ferment like the new Wine. After which, to make up that little burnt-wine which the fermentation had diſſipated, they fill up the Wine with other burnt-wine reſerv'd on purpoſe, or elſe they put in Spaniſh-Wine, or good White-wine, and ſtopping up the Veſſel, keep it in a cool place for uſe.

But if inſtead of burnt-wine, you deſire a *Sapa*, you muſt boil the juice of red Grapes, till there be but a third part left; Then ſtir it with a ſtick till it be quite cold, and let it reſt all night in the Veſſel, the better to purifie it ſelf from its Lees. But then inſtead of putting this depurated Wine into a Cask, you muſt let it boil again over a little fire, in the ſame Veſſel very clean, till the half be conſum'd; then take it off the fire, let it cool, and ſtay two or three days; then pour out the clear liqror by inclination, and leave the feces at the bottom of the Veſſel as before. By this ſecond boiling, the Juice will be reduc'd to two thirds, and will be of a conſiſtency not unlike that of ordinary Syrups.

You may alſo return the ſame *Sapa* upon the Fire again, and conſume about a fourth part, over a very gentle fire, if you deſire it ſhould be boil'd to the conſiſtency of Electuaries; or for the preſerving of Conditements. You may Aromatize theſe Juices thus differently

rently boyl'd by mixing with them, when they are cold, some drops of Oyl of Cinamon or Cloves, incorporated with fine-powder'd Sugar.

That which they call burnt-wine in *Languedoc* and *Province*, is a preparation very like that of Spanish-wine. This Wine is to be lookt upon as an Alimental nourishment, as well as the *Sapa* or the *Raisiné*. It breeds good and quick nourishment, and is proper to restore lost strength, to fortifie the Heart, Stomach, and all the other noble parts, to create an Appetite and help Digestion. The Dose of the burnt-wine is from one ounce to four, that of the *Sapa*, from one ounce to two. That of the *Raisiné* much the same. The burnt-wine is also made use of in Clysters instead of Decoctions, chiefly in Colicks proceeding from Wind and Acids.

Rob Cydoniorum.

℞. *Succi Cydoniorum ad maturitatem vergentium*, ℔ xviij. *Coque igne lento in vase fictili vitreato, donec Tertia tantum pars supersit. Refrigeratum Rob, quiete & decantatione fecibus liberatum, Oleorum Cinnamomi & Caryophillorum ana guttis tribus, Saccharo pulverizato exceptis, Aromatizetur & servetur.*

A Rob of Quinces.

℞. Of the Juice of Quinces enclining to be ripe ℔ xviij. Boyl them over a soft fire in an Earth'n glaz'd-Pot, till only the third part remain. When the *Rob* is cold, and freed from its feces by settlement and inclination, take of Oyl of Cinamon and Cloves, *an.* three drops, mix'd with powder'd Sugar, and Aromatize it, and then keep it for use.

Take a good quantity of Quinces half ripe, rasp them one after another into Earthen Pipkins, all but the inward hard Core. Let them settle two or three days, then squeeze them through a new strong Cloth, gently at first, afterwards very strongly. By that means you will have a Juice of Quinces very clear. Of which take eighteen pints, and put them into an Earth'n glaz'd Pipkin, or into a skillet of Copper Tinn'd, and let them boyl over a gentle fire, till two thirds are consum'd. Then let them cool, and set the *Rob* aside in the skillet for two or three days; then pour the clear Liquor into another very clean Vessel, and add to it the Oyls of Cloves and Cinamon, incorporated with an ounce of fine-powder'd Sugar, to mix them the better together, and when they are well mingl'd, put them up into a bottle well-stopp'd, and keep them for use.

The *Rob* of Quinces is indu'd with all the principal vertues that are attributed to the pulp of the Quinces. It is recommended to fortifie the Stomach, to help the weakness of retention in the Stomach, and Intestines. To create an Appetite, and help Digestion. It is giv'n with success in Diarrhea's, Dysenteries, Lienteries, the Choleric Disease, and Internal Fluxes of Blood.

Rob Mororum seu Diamorum.

℞. *Succi Mororum Rubi Humilis arvensis,*
Succi Mororum mori arboris nigræ semi-maturorum,
Mellis Narbonensis despumati, an. ℔ *iij.*

Coquantur igne lento in vase fictili vitreato ad debitam consistentiam, illisque permisceantur Spiritus Vitrioli vel Sulphuris, guttæ, xx.

Rob of Mulberries, or Diamorum.

℞. Of the Juice of Mulberries, of the low-field Bramble.
Of the Juice of Mulberries of the black Tree, half-ripe.
Of clarify'd Honey of *Narbonne*, *an.* ℔ iij.

Boyl them over a gentle fire in a Glaz'd Earth'n Vessel, to a due consistence, and mix with them twenty drops of Spirit of Vitriol or Sulphur.

This *Rob* may be made with these two Juices, or with either of the two separately without any addition of Honey; but besides that the Honey increases their detersive and cleansing quality, it makes the *Rob* more delightful, and fitter to be preserv'd for a longer time. The two sorts of Mulberries must be gather'd before they come to their maturity; that the *Rob* may be more detersive.

You must squeeze out the Juice through a strong Cloth, let it settle two or three days; then pour the clear Liquor by inclination into another vessel, weigh the quantity pre-

scrib'd

ſcrib'd, and boil it over a ſmall fire in a glaz'd Earth'n-pot, with the Honey clarify'd before, to a conſiſtence like that of Syrups. Then let the *Rob* cool, ſcum it well, and add to it the Spirits of Vitriol or Sulphur, and ſo put up it in a glaſs-bottle, or a gally-pot well-ſtopp'd for your uſe.

This *Rob* is chiefly for the cure of Ulcers and Inflammations in the Mouth, Tongue, and Throat. For it is very proper to qualifie the Acrimony of the humours, to cleanſe, ſtop up, and conſolidate; ſometimes this *Rob* is taken alone by the ſpoonful. But it is moſt frequently mix'd in cooling and deterſive decoctions.

Rob Baccarum Sambuci.

℞. *Succi Baccarum Sambuci, tribus diebus per reſidentiam depurati,* ℔ vj. *Aut quantum libuerit. Coque igne lento in vaſe fictili vitreato, ad duarum partium Conſumptionem. Adde ſi volueris Sacchari vel Mellis deſpumati portionem aliquam.*

Rob of Elder-Berrier.

℞. Of the Juice of Elder-berries clarify'd by three days ſettlement, ſix pints; or as much as you pleaſe. Boil them in a glaz'd Earth'n-Pipkin over a ſoft fire to the conſumption of two parts. Add if you pleaſe ſome little quantity of Sugar or clarify'd Honey.

You muſt take the Elder-berries when they are fully ripe, take from them all their little ſtalks, ſqueeze them through a ſtrong Cloth, and draw out their Juice; let them ſettle for three days, ſeparate them from their feces, and boil them over a ſoft fire in an Earthen-Veſſel well-glaz'd, to the conſumption of two thirds, or to the conſiſtence of a *Rob*. Let it cool, and take off the ſcum if there be any. To make the *Rob* more pleaſant and fit to keep longer, you may add a third or a fourth of its weight of fine Sugar, or clarify'd Honey.

This *Rob* is very much commended for the cure of Diſeaſes of the Brain, particularly of the Epilepſie and Palſie. It is accounted a Specifick againſt Hyſteric Paſſions, and for Dyſenteries. It may be tak'n alone in a ſpoon faſting, or mix'd in Potions. The doſe is not certain: but you may take from half an Ounce to an Ounce at a time.

The other *Robs* which are prepar'd of the Juices of ſeveral Fruits merit no farther mention here, becauſe they are converted into Syrups, which the ſweetneſs of the Sugar renders more pleaſing then all the *Robs* that can be prepar'd.

CHAP. XII.

Of Sweet-Meats.

THE difficulty of accommodating Medicines to the taſte of Patients, and the deſire of pleaſing them, and to have at all times ready ſome parts of Plants of which they may ſtand in need, have been the principal occaſions of inventing Sweet-meats. It happ'ns alſo that the liking which Patients take to them when ſick, gives them a deſire to continue the uſe of them when they are well.

And the healthy themſelves have ſo far tak'n their part, and made Sweet-meats ſo common, that there is no good City, where there are not ſome who make it their Trade and Calling to make all ſorts of Sweet-meats. But though it be not the *Apothecaries* buſineſs to make for the healthy, yet they are oblig'd for the benefit of the ſick to condite ſeveral ſorts of Plants which are not within the knowledge or practice of the ordinary *Comfit-makers*.

If all the parts of Plants were to be had at all times, or if they were all of an equal perfection, there would be no great trouble to make proviſion of any Sweet-meats, nor need we make any conditement but upon occaſion. But as they muſt have time to grow, increaſe, come to perfection, and then decline again, we muſt chooſe the beſt time for the vertues or qualities of the Plant which we intend to candie. Herbes, Fruits, Stalks, Flowers and Seeds cannot be fit but in their Seaſon. Roots that may be had at all Seaſons of the Year, yet are not fit to be condited till the Spring of the Year, when they begin to put forth their Leaves: for then they poſſeſs to themſelves all that the Plant has of vertue; beſides that they are then more tender and more juicie

then

then at any other Seaſon. Sometimes the Flowers are condited before they are blown; Seeds and Fruits half ripe: And ſometimes we ſtay till every one of theſe comes to their perfect maturity. Sometimes the Roots, Flowers, Fruits, and other parts of Plants are condited whole, ſometimes cut in pieces, either for convenience, or to ſeparate what is to be thrown away. Sometimes they are to be reduc'd into a paſte, and boyl'd with Sugar or Honey. But Sweet-meats are ſo common that I think I need not give many Examples thereof.

Radices Eringii conditæ.

℞. *Radicum Eringii mundatarum & in partes diſſectarum quantum volueris: coque ad mollitiem in aquæ communis ſufficiente quantitate; in decocto diſſolve Sacchari albiſſimi pondus Radicibus æquale: Coque ad Syrupi craſſioris conſiſtentiam; deſpuma, calidúmque Syrupum Radicibus in vaſe fictili vitreato poſitis ſuperfunde. Poſt dies aliquot decantatum Syrupum ad priorem conſiſtentiam recoque, calidúmque radicibus ſuperfunde. Idque ter, quatérve repete, & tandem ita Syrupum coque, ut in debita conſiſtentia poſſit in poſterum cum Radicibus aſſervari.*

Eringo-Roots condited.

℞. Of theſe Roots as many as you pleaſe; waſh them well, then take out the pith and the outſide, then boyl them in fair Water till they are ſufficiently tender. Then take them out of the Water, lay them upon a white Linnen-cloth, and drie up the moiſture as much as may be. Then weigh them, and take the ſame weight of fine Sugar, and boyl it with the Decoction of the Roots, ſcumming it from time to time, till the Sugar have acquir'd a conſiſtency a little thicker then that of ordinary Syrups. Then put the Roots into a Pot of glaz'd-earth, and pour the Syrup upon them fiery hot; ſome few days after pour this Syrup by inclination into a Baſon, and reboyl it over a ſoft fire, till it have acquir'd its firſt conſiſtency; then pour it hot a ſecond time upon the Roots. A while after boyl the Liquor a third time, and pour it upon the Roots again. Repeat this again if need be; and at length ſo boyl the Syrup that it may be kept for the future with the Roots.

Eringium or Sea-Holly is a Plant well-known: the Roots whereof muſt be gather'd in the Spring-time, when the Herb begins to appear.

Eringo-roots are opening and diuretic. They are alſo great friends to the Stomach, Liver and Spleen. They are ſometimes mix'd in Opiates and other Medicines.

The Example of this Root may ſerve for the conditing of Succorie, Burrage, Bugloſs, Comfrey, Elecampane, Satyrion, Scorzonera or Vipers-graſs, and ſeveral others; from all which you muſt take off the ſmall rinds and ſuperfluities. They may be condited whole that have no pith, or are not very big; and cut into ſlices thoſe that are over-large.

Cortices Malorum conditi.

℞. *Corticum Malorum Citreorum in fruſta oblonga inciſorum quantum libuerit, per dies quindecim Aquæ marinæ committantur; educantur, poſtea ex illa aqua, & in Fontanam ejiciantur, in eáque ſæpius renovata relinquantur, donec ſalſedinem depoſuerint. Bulliant tandem leviter in nova aqua, ut ſiquid ſuperſit ſalſedinis auferatur. Tunc in recenti aqua ad ſufficientem teneritatem coquantur, deinde linteo mundo quantum fieri poteſt exſiccati in vaſe novo fictili vitreato ordine collocentur. Illis ſaccharum in proprio Corticum decocto ad debitam conſiſtentiam coctum calide ſuperfundatur, illiuſq; coctio & ſuperfuſio repetatur, ut*

Citron-Peels condited.

℞. Of the Peels of Citrons as many as you pleaſe; cut them into long ſlices about an inch or an inch and a half broad: range them one by one in a clean Barrel, cover them with Salt-water, and leave them in that Water for fifteen days, or longer if you pleaſe; then take them out, and ſteep them in Fountain-water for ſeveral days, ſhifting and re-ſhifting the Water, till you can perceive nothing of ſaltneſs in them. Then boyl them gently in Freſh-water, to take away any thing of Salt that might remain. Then throwing away that water, boyl them in freſh-water, till they are ſufficiently tender. Then take out the Peels out of

in ſuperiori Radicum Eringii conditurâ diximus.

the water, and with a Linnen-cloth dry them as well as you can. Then weigh 'em, and take twice the weight of fine Sugar, and boyl it in the laſt Decoction of the Peels to the thickneſs of Honey. Then having laid the Citron-peels one by another in an Earth'n-glaz'd-pan, pour the Sugar upon them ſcalding-hot, ſo that they may be altogether well-cover'd: leave them ſo for ſome days, and then pour out the Syrup by inclination into a Baſon, and repeat Coction and Superfuſion as is directed in the Conditing of *Eringo*'s.

The difficulty of conditing Citron-peels without cauſing them to loſe their ſhape, or ſo as to keep them from falling to pieces or into paſte, is the reaſon that we are forc'd to make uſe of Salt-water, which preſerves their Rinds entire, fair and tranſparent.

If you would preſerve theſe Peels dry, take them out of the Syrup, let them drain; then boyl fine Sugar in the Water to the conſiſtency of a ſolid Electuary; put in the Peels, and let them boyl till the Sugar be again gently boyl'd to the conſiſtence of a ſolid Electuary. Then take out the Peels, letting the Sugar drain off, and lay the Peels upon twigs in a Stove, to be there entirely dry'd.

You may make good uſe of the firſt Syrup which ſerv'd to condite the Citron-peels, being very much eſteem'd under the Name of The Syrup for preſerving the Citron-peel, the vertues whereof are very near as good as thoſe of the Peel, to ſtrength'n the Heart, Stomach, and all the Noble-Parts.

You may alſo boyl in the Water new Citron-peel, till it be almoſt reduc'd into paſte; beat it afterwards in a Marble-mortar, and paſs it through a Hair-Sieve, adding thereto the weight of it in powder-Sugar; then boyling it over a gentle-fire in a Glaz'd-earth'n-pipkin, and at the end putting a little Juice of Citron, to give it a pleaſing acidity.

In the ſame manner Quinces, Pears, Apples, Abricots, Peaches, Plumbs and many other Fruits may be reduc'd into Paſtes of the like nature. In the ſame manner may the Stalks of Lettice ſeparated from their Rind, the pulpie-part of Melons, long-Gourds, Cucumbers, Hartichoak-bottoms, and many other pithie parts of Plants be condited. You may alſo put them into Salt-water and condite them whole, as I have directed for Citron-peel.

You may alſo make uſe of a clear Lye inſtead of Salt-water to condite green Almonds. And though they become extraordinary pale, yet by boyling them afterwards in fair Water, they recover a colour more green then that which they had before, and you may then preſerve them drie or liquid, without fear of altering their colour. Conditements in Honey are not ſo much us'd as thoſe in Sugar, as being more acceptable in all Sweet-meats: beſides that Honey is not ſo proper for dry Sweet-meats. And though in *Languedoc* and *Provence* during the cold weather they preſerve Almonds dry with Honey, and to make a Sweet-meat ſometimes red, ſometimes white, which they call *Nogat*, or *Tourron*; yet it is not a Sweet-meat that can be kept long: for the Honey will give and at length diſſolve altogether, when the moiſt air has had time to penetrate it.

The preſerving of Olives is very different from all others; eſpecially becauſe it is done without either Sugar or Honey. Their Preparation conſiſts chiefly in taking away their natural bitterneſs, to render them pleaſant to the taſte, and in preſerving them long in their beauty and goodneſs. They that regard not their beauty, only ſlit the green Olives in two with a Knife, and bruiſe them gently, and ſoak them in fair Water, which they ſhift oft'n till their bitterneſs be almoſt all tak'n away. Then they put them into Pots of Glaſs or Earth-glaz'd with ſome ſmall bunches of Fennel, or ſome pieces of dry Citron or Orange-peel, and cover them with a Water indifferently ſalt, wherein they keep them to eat, as they have occaſion. But they that deſire to preſerve the colour of their Olives, and to keep them entire, make uſe of a Lye made of the aſhes of Oak-wood, Vine-branches or the like: or elſe of Quick-lime, ſteeping their Olives therein four and twenty hours, or till they have quite loſt their bitterneſs. Then they put their Olives into an indifferent Salt-water, adding to them ſweet Fennel, Citron or Orange-peel cut into little ſlices, or ſome ſuch other Aromatic, as they ſhall like beſt. They alſo pour in as much good Oyl upon the Water as may ſwim about a fingers-breadth above it, the better to preſerve the whole. CHAP.

CHAP. XIII.

Of Gellies.

WE give that now-a-days the Name of *Gelly*, which the *Latins* call'd *Gelatina*. Gelly is usually made of Juices extracted by pressing, or by decoction of several Fruits. They are also made by the long boyling of different Animals, or of their parts. These Juices must be clarify'd by Despumation or otherwise, and be sweeten'd with Sugar, to make them pleasing to the Palate. They must be also boyl'd to the consistency that a Gelly ought to have, which is not to be too fluid when it is cold, and not to stick to the Trencher or Plate when you drop a few drops to try the consistency. Gelly is so nam'd, because it is transparent like Ice, and because it congeals in the cold, and melts in the heat. However it differs from Ice, because it never becomes hard like that, but remains always soft, unless it freeze in extremity of weather.

Gellies are so common among the Ladies, that I shall only give you the Examples of two or three made by Decoction.

Gelatina Cydoniorum.

℞. *Cydoniorum ad maturitatem accedentium,* ℔ *viij. in frusta incide cum Cortice & Seminibus, & in aquæ communis* ℔ *xx decoque ad dimidiæ circiter partis consumptionem: decoctum cola & Cydonia exprime. Colaturam Ovi albumine cum Sacchari* ℔ *vj. clarifica; & clarum liquorem ad Mivæ consistentiam coque, Pixidibúsque ligneis vel Vasis vitreis, aut fictilibus vitreatis reconde.*

Gelly of Quinces.

℞. Whole Quinces not fully ripe, and cut them into five or six slices, and weigh out eight pound, and boyl them in twenty pints of Water, to the consumption of half. Strain the Decoction, and squeeze the Sediment well; and when it is almost cold, clarifie it with the white of an Egg, with six pound of fine Sugar, after the ordinary manner. Then boyl the clear liquor over a gentle-fire, to the consistency of a Gelly. Then take the Skillet from the fire, and when the Gelly is half-cold, Aromatize it with four drops of Distill'd-oyl of Cloves, and two drops of Oyl of Cinamon, incorporated first with fine powder'd-Sugar. The whole being well mix'd, and the Gelly well scumm'd, pour it out into Glasses, or Glaz'd-pots, or else into Woodd'n-Boxes or Moulds, moisten'd before-hand. The *Latins* call the Gelly of Quinces *Mivam Cydoniorum.*

This Aromatization is to be preferr'd before that of the Ancients, who direct you to put Cinamon, Cloves, Cardamoms, Saffron, Trochisques of *Gallia* Moscata, Ginger, Mastich, lignum Aloes, and Musk in powder ty'd up in a knot, and to steep them in the Gelly while it boyles; not considering that besides the harsh and unpleasing taste which the grosser part of all this Mixture of Drugs would give the Gelly, their Aromatick and volatile part would dissipate, and leave nothing behind but the ill-qualities of the Terrestrial. You may also, besides the Oyls of Cloves and Cinamon prescrib'd for Aromatization, add some drops of the Essence of Musk and Ambergrise, for those that love sweet Scents. There are some that take out the Seeds from the Quinces when they make the Decoction for the Gelly. Others on the contrary make use of the Seeds, Cores and Rind, reserving the pulp of the Quinces to condite, or to make Marmalate.

You may also make a Gelly of Rennettings or other good Apples, cutting them into quarters, boyling them in Water almost to a mash, and straining the Decoction through hair-sieve without pressing the Apples. For this Decoction thus strain'd through the Sieve reverst, and re-past through a Bag, mix'd with the weight in Apples of very fine Sugar, and boyl'd over a gentle fire to a due consistency, makes a Gelly as pleasant as sightly, to which you may add at the end of the Decoction some drops of the Juice of Citrons well-

clarify'd to give them a ſharp taſte. You may alſo cut the rind of candy'd Pome-Citron into ſmall pieces, and lay at the bottom of the Glaſſes or Boxes where you put your Gellies, which being pour'd hot upon theſe pieces, will become by that Mixture much more acceptable then without it.

Gelatina Cornu Cervini.

℞. *Raſuræ Cornu Cervini* ℔ ß, *Aquæ communis* ℔ *vj. Coque lento igne, in vaſe fictili vitreato, ad duarum partium conſumptionem. Cola & exprime, Colaturam clarifica Ovi albumine cum Sacchari optimi* ℥ *vj. Vini albi* ℥ *iiij. Succi Citri* ℥ *j. Et coque igne lento ad Gelatinæ melioris conſiſtentiam.*

Gelly of Harts-Horn.

℞. Half a pound of the ſhavings of Harts-horn, and boyl it over a gentle fire in ſix pints of Fountain-water in a glaz'd-earth'n Pipkin to the conſumption of two thirds of the Water. Strain out the Decoction, ſqueezing the Harts-horn well; then clarifie the ſtraining with the white of an Egg, adding ſix ounces of fine Sugar, four ounces of white Wine, and one ounce of Juice of Citrons. After which boyl the clarify'd Liquor over a gentle fire, to the conſiſtency of a Gelly, rather too ſoft then too ſtrong, which you muſt empty hot into Glaſſes or Pots, and there let it cool.

You may Aromatize this Gelly with ſome half a drop of the Eſſence of Citron, Cloves or Cinamon, incorporated with fine powder'd Sugar.

This Gelly of Harts-horn is never prepar'd but upon occaſion. For it cannot be kept above four or five dayes in Winter, and two in Summer; and then you muſt keep it in a Cellar. Some nice Perſons may diſapprove the boyling of the Wine and the Gelly, believing that the Spiritous part diſſipates in boyling. But in regard the Gelly cannot be clarify'd without the Wine, there is no care to be tak'n for the diſſipation of the Spirit, ſo much the rather becauſe that the Gelly being moſt frequently prepar'd for thoſe that are in Fevers, we may be glad of the diſſipation of thoſe Spirits.

Gelly of Harts-horn may be call'd a Medicinal-nouriſhment: For it breeds good nouriſhment, and ſtrength'ns the Heart and Stomach. It is us'd in all ſorts of Fevers, eſpecially the putrid, and in all Epidemic-diſeaſes; and is highly approv'd in all weakneſſes, and want of retention in the Stomach and Bowels.

In the ſame manner may be prepar'd Gelly of Vipers, and of the parts of other ſorts of Animals.

CHAP. XIV.

Of Conſerves.

ROOTS, Herbs, or Flowers are uſually the foundation of all Conſerves. Their preparation therefore not being very difficult, and requiring no tedious Diſcourſes, I will only give you two or three Examples, by which you may prepare all ſorts of Conſerves.

Conſerva Radicum Helenii.

℞. *Radicum Helenii recentium mundatarum quantum libuerit; coquantur ad mollitiem in ſufficiente quantitate Aquæ Fontanæ; deinde pinſentur, & per Cribrum inverſum trajiciantur. Decoctum coquatur lento igne cum Sacchari duplo Radicum pondere, ad Electuarii ſolidi conſiſtentiam. Illique tantiſper refrigerato, trajecta pulpa permiſceatur; refrigeratáque conſerva vaſe idoneo recondatur.*

Conſerve of Roots of Elecampane.

℞. What quantity you pleaſe of the new Roots of Elecampane, waſh them well, and cleanſe them from their little rind, and from all ſuperfluities; cut them into great pieces, boyl them in ſix times their weight in Water over a moderate fire, till they are ſufficiently tender. Then bruiſe them in a Marble-mortar with a woodd'npeſtle, and ſtrain the pulp through a Hair-ſieve revers'd. In the mean while boyl twice the weight of fine Sugar in the Decoction of the Roots, to the conſiſtence of a ſolid Electuary; and when it is half cold, incorporate the pulp therein, and put up the cold Conſerve in a fit veſſel.

Some

Some let the Decoction be quite cold before they incorporate the pulp. Others put it hot into the pot, to the end there may be a cruſt proper to preſerve the Conſerve. However you muſt not cover the pot till the Conſerve be quite cold, for fear the ſuperfluous moiſture which riſes with the Conſerve, not finding vent, ſhould fall upon the Conſerve and putrifie it.

This Conſerve, as alſo that of many other Roots may be done without boiling the Roots, as alſo without boyling the Sugar. For you may ſtamp the raw Roots in a Marble-Mortar, preſs the pulp through a hair-ſieve revers'd, and incorporate it with twice as much the weight of fine-Sugar in powder, and the Conſerve ſhall be made. But beſides that the raw Roots are more difficult to ſtamp and ſtrain, and more fibrous then thoſe which are boyl'd, the Conſerve is alſo more diſpleaſing and coarſe. In the ſame manner may be prepar'd the Conſerves of all pithy Roots.

Conſerve of Elecampane, cuts, and powerfully looſens Flegm from the Lungs, the Reins and Stomach, it ſerves for expectoration, helps Digeſtion, and creates an Appetite. You may take it alone, or mix'd in Opiates, Loches, or Tablets: you may take from half an ounce to an ounce.

Conſerva Roſarum mollis.

℞. *Roſarum Rubrarum recentium exungulatarum*, ℔ j.
Sacchari Albiſſimi, ℔ ij.
Fiat ex arte Conſerva.

Soft Conſerve of Roſes.

Take one pound of red Roſe-buds, cut off the white part at the bottom with a pair of Sciſſors. Stamp them exactly in a Marble-Mortar, mixing with them by degrees, two pound of fine powder'd Sugar.

This mixture will make a body not unlike that of a ſoft Electuary, of a dark red colour and pleaſing to the taſte. You may at the latter end add ſome drops of Spirit of Vitriol or Sulphur, which will heighten the colour of the Conſerve, and make it look more red. After this you may put it up in a bottle well-ſtopp'd, and expoſe it to the Sun for ſeveral days, ſtirring the Conſerve from time to time with a woodd'n Spatula, the better to unite the Roſes with the Sugar, and to conſume the ſuperfluous moiſture.

But if you deſire a Conſerve of Roſes more pleaſant, and more ſightly, this is the way. Give a gentle wamble to about a pint of Roſe-Water, and having tak'n it off the fire, caſt into it a pound of large red Roſe-buds, clean'd as before, and having well-ſteep'd them, ſtrain the Liquor through a clean Linnen-Cloth, ſqueeze the Roſes with your hands, and beat them well in a Marble-Mortar. In the mean while boil two pound of fine Sugar in the Water where the Roſes were ſteep'd, to the conſiſtence of a ſolid Electuary, and when it is well boil'd, mix the Roſes therein perfectly well-ſtamp'd; ſtir them for ſome time the better to make the mixture, and to evaporate the ſuperfluous moiſture. Then put them up in a pot, and cover them well, when they are quite cold. This way makes the Roſes very tender, and makes them fit to be the better and more eaſily ſtamp'd. The Roſe-Water increaſes the good Scent and vertue of the Conſerve: and the mixture of the Roſes with the Sugar becomes more exact. The Conſerve is more ſightly, and retains its vertue and its beauty longer, then by the ordinary preparations.

There is alſo another preparation of Conſerve of Roſes not inferiour to this, which is done by putting the Roſe-buds cut into a glaſs-*Cucurbit*, in Maceration in *Balneo Mariæ*, between luke-warm and boiling hot; keeping them there till they are ſufficiently tender, boyling the Sugar with the Roſe-Water, and obſerving the ſame Method, as for the former Conſerve.

The principal uſe of Conſerve of Roſes, is to ſtop defluxions from the Brain falling upon the Lungs. It is alſo good to ſtay coughing and ſpitting of Blood: to ſtrengthen the Stomach, Heart, and Brain, to ſtay vomiting and looſneſs of the Belly; to keep the Breath ſweet, to provoke ſleep; to which purpoſe it is uſually apply'd in a frontal to the Forehead. This Conſerve is to be tak'n faſting from one dram to two, often mix'd with Confections, Powders, Eſſences, and other Conſerves. Sometimes it is outwardly apply'd upon the Heart and Stomach in a ſolid Epitheme, alone, or mix'd with other Medicines.

Con-

Conſerva Roſarum ſolida.

℞. *Roſarum Rubrarum mundatarum, & ad Solis Radios celeriter ſiccatarum*, ℥ j. *in Pulverem ſubtilem redigantur, poſtea irrorentur dragma Semis Spiritus Sulphuris. Tunc* ℞. *Sacchari Albiſſimi*, ℔ j. *Aquæ Roſarum*, ℥ iiij. *Coquantur ſimul ad Electuarii ſolidi conſiſtentiam. Deinde pulvis Roſarum immiſceatur, & ubi fere refrixerint, formentur Tabellæ vel Rotulæ ad uſum.*

Solid Conſerve of Roſes.

Take an ounce of red-Roſes cleans'd, and haſtily dry'd in the Sun, powder them very fine, and ſprinkle them with half a drachm of Spirit of Sulphur in ſome glaſs-Veſſel, mixing them well with a woodd'n Spatula. Then boyl a pound of fine Sugar in four ounces of Roſe-Water to the conſiſtency of a ſolid Electuary, and incorporate the Roſes therein, being tak'n off the fire, ſtirring them well with a woodd'n-Peſtle. And when you obſerve a film upon the Conſerve, pour it out upon a ſheet of Paper, or a Pewter-platter to make Tablets thereof.

This is call'd hard Conſerve of Roſes, which will be of a good colour, and grateful to the taſte; the vertues whereof are much the ſame with thoſe of the liquid Conſerve. It is alſo very convenient to carry in the Pocket.

They are deceiv'd who think that the Roſes ought to be dry'd in the ſhade to make them look the fairer. For experience and reaſon have taught me, that red Roſes ſo dry'd are never ſightly in colour, but become very brown. And therefore it is not without cauſe, that you are here directed to dry them haſtily in the Sun. For being ſuddenly dry'd they look fair and are full of vertue, becauſe the red-Roſes abound in ſuperfluous and viſcous moiſture, which is not eaſily ſeparated, unleſs it meet with ſome powerful Agent to conſtrain it; ſuch as is the Sun by means of his heat. Whereas if you dry them in ſhade only, the action of the Sun being too weak, and ſlow, the Roſes in that ſpace of time, wither and turn black. However, you muſt be careful to take them out of the Sun, when they are ſufficiently dry; for after that, the Sun does but burn them, and make them change colour.

You muſt be careful alſo to put the Roſes in a Glaſs-bottle well-ſtopp'd to preſerve them in their vertue and beauty, which you may do for a year or two together.

Conſerva Violarum mollis.

℞. *Violarum recentium mundatarum* ℔ ß.
Sacchari Albiſſimi, ℔ j. ß.
Fiat ex arte Conſerva.

Conſerve of Violets liquid.

℞. Half a pound of new Violets very clean, and beat them exactly in a Marble-Mortar; and when they are well-beaten, boil over a ſoft fire in ſix ounces of diſtill'd Water of Violets, a pound and a half of fine Sugar, to the conſiſtency of an Electuary. Then take the Sugar off the fire, and when it is half-cold, mix the ſtamp'd Violets therewith.

At the ſame time pour this Conſerve into a pot, that the film or cruſt may grow over it, which will very much preſerve it. And when it is cold cover the pot very cloſe, and keep it for your uſe.

This Conſerve may ſerve as an example for thoſe of Burrage, Bugloſs, Water-Lillies, and ſuch-like flowers as abound in moiſture.

The moiſture of the Violets is the reaſon of putting more Sugar into Conſerve of Violets, then into Conſerves of Flowers leſs moiſt. And the method of boiling the Sugar is much better, then to mingle the Violets in powder with the Sugar: in regard the Flowers ſeem better mix'd in the boil'd Sugar, and for that by putting the Conſerve hot into the Pot, the cruſt that grows over it reſiſts the penetration of the Air, and makes the Conſerve keep much longer.

Conſerve of Violets is very cordial; It is very much eſteem'd in Diſeaſes of the Liver and Spleen. It qualifies the Acrimony of the humours, and makes them ſlippery. It is admirable in Diſeaſes of the Breaſt, and to cool the boyling of the Blood.

CHAP.

CHAP. XV.

Of Syrups.

Julleps were the fore-runners and the occasion of the invention of Syrups. For the Ancients finding, that the superfluous moisture of Juleps hastn'd their putrefaction, bethought themselves of consuming it by boiling, and to reduce them to a thicker consistency, giving them the name of Syrups. The word Syrup is deriv'd from σύρω, to draw, and ὀπὸς, which signifies *Juice*.

All Syrups are pleasant Compositions, made of Waters, Juices, Tinctures, or Decoctions boyl'd with Sugar or Honey, to a consistency somewhat thick, and fit to keep. The Juices that compound Syrups, are usually drawn from several parts of Plants, sometimes by expression, sometimes by the impression of their succulent substance into any Liquor. They may be also drawn from the parts of Animals, as Syrup of Tortoises. Tinctures, Infusions, or Decoctions, made use of in the composition of Syrups, are as so many means, to impart the virtues of different Medicines to the same Syrups.

Besides the design of long-keeping, our Artists had a desire to have the vertue of one or more Medicaments clos'd together in a small Room. But the number of Syrups is so great, that should we prepare them all, the shops would not be big enough to hold them. For which reason I shall not fill this Volumn with Syrups that may be let alone, as being out of use, or such as may be prepar'd when prescrib'd. I shall only therefore here set down such Syrups, the use whereof is confirm'd by the practice and prescriptions of the Physicians, and which deserve to be prepar'd for their vertues, and advantages which the sick receive thereby.

Syrupus e Succo Citri.

℞. *Succi acidi recentis defæcatissimi Malorum Citreorum,* ℔ *iij.*
Sacchari Albissimi, ℔ *vj.*
Fiat ex arte Syrupus.

Syrup of the Juice of Citron.

Take three pints of the Juice of Citron extreamly well purify'd, and put it into a Glass, or glaz'd Earth'n Vessel, then dissolve therein six pound of fine Powder Sugar; stirring it all the while till the Sugar be wholly incorporated with the Juice.

Continue stirring as well when it is off, as when it is upon the fire.

Make use of no Vessels for the Preparation of this or any other Syrup compos'd of Acid Juices, but such as are made of glass, or glaz'd Earth.

There is another way of making this Syrup, by taking six pound of white and dry fine Powder Sugar, clarifying it with the white of an Egg, and six pints of Fountain-water, and then boyling it over a fire, to the consistency of a solid Electuary; and after that, when it is off from the fire, pouring into it three pints of Juice of Lemons, well-clarify'd, and stirring the Syrup with a Woodd'n Pestle, till it be almost cold.

The Ancients believ'd that the quantity of the acid Juices of Fruits in Syrups, ought to be greater then that of the Sugar, and that the same Juices requir'd a longer boiling, as well to consume one part of their moisture, which they thought superfluous, as also to make a consistence necessary for the Syrups which were compos'd of them. For this reason they boil'd their Juices a long time. I confess that the acid Juices evaporated in a glass-Vessel in *Balneo Mariæ*, do lose of their aquosity, and that the Juice which remains in the Vessel, is more acid, then the Juice before the watry part was evaporated.

But besides that, there is no need of so much Acidity, they lose of their beauty, and become less cooling by being boyl'd. Moreover the watry part is not unprofitable in the composition of these Juices, in regard it is very refreshing, and for that by the means thereof, the acids are more conveniently convey'd to the remote parts, without any offence to the parts, by reason of their Acrimony.

And for as much as the Syrups, which are only compos'd of acid Juices and Sugar, require not a consistency altogether so thick as that of other Syrups, they must not be kept

so

ſo long upon the fire, for fear of changing their quality. This Syrup may ſerve for an example for all Syrups compos'd of the acid Juices of Fruits, and Sugar.

Syrup of Citrons cools and moiſtens very much, it quenches thirſt, and ſenſibly cools the heat of choleric-Fevers. It ſtrengthens the Stomach and Bowels, weak'nd by the hot intemperature of humours, it reſiſts putrefaction and contagious Air. It is good againſt Worms, Poyſon, and Peſtilent and Epidemic Diſeaſes. The Doſe is uſually from half an ounce to an ounce, in a glaſs of Ptiſan, or ſome other Liquor. It ſerves as a foundation for ſome compoſitions, and is mix'd in Potions and other Medicines.

The Syrups of Granates, red-Currans, Barberries, Verjuice, and the like are prepar'd after the ſame manner.

Syrupus e Succo Oxytriphylli.

℞. *Succi Oxytriphylli depurati,*
Sacchari Albiſſimi, ana. ℔ iiij.
Fiat ex arte Syrupus.

Syrup of the Juice of Wood-Sorrel.

Take four pints of the Juice of Wood-Sorrel well-purify'd; pour them into a glaſs-*Cucurbit*, cover it with its Alembic ſlightly luted, place it in *Balneo Mariæ*, and diſtil with a moderate fire about half the moiſture. Then take away the *Cucurbit*, and let it cool. That done, pour out the acid Juice, which remains by Inclination, and paſs it through a brown-Paper, to ſeparate the Terreſtreities gather'd in Diſtillation. Then weigh out two pints of this clarify'd Juice, and diſſolve therein four pound of fine powder'd Sugar, and give the whole a little wamble over the fire. Take it off, ſcum it, and put up the Syrup, when it is cold.

You may alſo clarifie the fine powder'd Sugar with the white of an Egg and fair Water, boil it to the ſtrong conſiſtency of a ſolid Electuary, and afterwards incorporate the Juice of Wood-Sorrel prepar'd as I have ſaid, and make a Syrup as you do of the Juice of Lemons.

Wood-ſorrel, otherwiſe call'd *Oxytriphyllum*, and *Allelujah*, is a Plant well-known. If the Juice were as acid as that of Citrons, two pints of Juice would be enough for the four pound of Sugar preſcrib'd. But becauſe it is much leſs acid, and much more watry, there is a neceſſity of ſeparating by diſtillation one part of its aquoſity, to make its acidity ſomewhat like that of the Juice of Citrons.

The Syrup of *Allelujah* cools very much. It is very uſeful to quench thirſt, to cool the heats of the Stomach and Liver. It is very much commended in Burning-Fevers, Malignant and Epidemic Diſtempers. It comforts and ſtrengthens the Heart, and cures the Inflammations of the Mouth, Tongue, Palat, and Throat. The diſtill'd-Water of the Juice may be very properly mix'd with the Syrup, or you may drink the Water alone. The Doſe is the ſame with that of the Syrup of Citrons.

Syrupus Cinamomi Regius.

℞. *Aquæ Cinnamomi ſtillatitiæ ſupra novum Cinnamomum electum cohobatæ & iterum diſtillatæ,* ℔ j.
Sacchari Albiſſimi in aqua Meliſſæ ſoluti & in Electuarium ſolidum cocti, ℔ ij.
Fiat ex arte Syrupus.

Royal Syrup of Cinamon.

Take two pound of very fine Sugar, and boil them in eight ounces of Balm-water, to the conſiſtence of a ſolid Electuary, and when it is almoſt cold, mix it with the Cinamon-water, and put up the Syrup in a bottle well-ſtopp'd.

The Preparation of the Cinamon-water, which is the foundation of this Syrup, is to be ſeen in the Third Part of this *Pharmacopœa*, whither I refer the *Reader*.

Cinamon is the Rind of a tree, as big as an Orange-tree, which grows in the Iſland of *Ceylon* in the *Eaſt-Indies*. The branches ſpred out of the body very ſtreight, thick, in good order, and without knots. They cut thoſe branches from the Trunk, when the Tree

Tree is in ſap, and take off the Rind, which is the true Cinamon, which at firſt is flat, without colour, and having little taſte or ſmell: but as it dries it rolls up like a Parchment, and loſing its ſuperfluous moiſture, which ſtifled the beſt part of its good qualities, recovers its pleaſing and penetrating ſmell, and its no leſs agreeable and biting taſte. The beſt is of a pale purple brisk colour, ſmooth within and without, and of a ſubſtance indifferently compact. It is not ſubject to rott'nneſs, for it will keep a long time, provided it be well put up. The Wood is without any conſiderable vertue, no more then the Flowers which are white and ſweet-ſcented, and follow'd by a Fruit in ſhape and bigneſs much like an Olive, which are full of a green, ſharp, bitter-oylie Liquor, but little regarded.

The Syrup of Cinamon is a Cordial that operates quickly. It is adminiſtred ſucceſsfully in weakneſſes and ſounding fits, to recall the diſſipated Spirits. It very much ſtrengthens the Stomach, and the Brain, and all the Noble-parts. It ſtirs up the Appetite, helps Digeſtion, expels Wind, ſweetens the Breath, facilitates the Travels of Women, provokes the *Menſtruums*, and remedies Obſtructions of the Matrix. You may take from two drams to an ounce, either in a Spoon, or mix'd with Opiates, or other Medicines.

Syrupus Coralliorum.

℞. *Coralliorum rubrorum in ſubtiliſſimum pollinem ſupra Porphyritem redactorum*, ʒ iiij.
Succi Berberini defæcatiſſimi, ℔ iij.
In Cucurbitam vitream immiſſa in Balneo Cinerum horis quadraginta ſtent, per vices Spatulâ ligneâ agitando; Deinde filtretur Liquor, & cum Sacchari Candi ſubtiliter pulverati duplo pondere fiat in Balneo Mariæ moderatè calido ex arte Syrupus.

Syrup of Coral.

Take four ounces of red-Coral well-choſen, break it upon a Porphyrie-ſtone till it be reduc'd to perfect duſt, moiſtning it now and then with Roſe-water. When it is dry, put it into a glaſs-*Cucurbit*, and pour upon it three pints of Juice of Barberries well-clarify'd; put the *Cucurbit* in a Bath of Aſhes moderately hot, for forty hours, ſtirring the Ingredients from time to time with a Woodd'n-Spatula. Then filter the Liquor through a brown-Paper; weigh it, and having return'd it into a glaſs-*Cucurbit* very clean, and ſet the *Cucurbit* upon a luke-warm *Balneum Mariæ*, diſſolve in this Liquor double the weight of fine Sugar-candy finely powder'd. When the Syrup is cold put it carefully up in a glaſs-bottle.

Coral, call'd alſo *Lithodendron*, or the *Petrify'd Tree*, is tak'n by ſome for a Mineral, by reaſon of the hardneſs of its ſubſtance reſembling that of ſtone; but it may paſs for a Plant among thoſe that conſider how it grows like a Plant in the bottom of the Sea. Nevertheleſs, we are not to credit thoſe who have affirm'd that Coral fructifies, and brings forth Berries, for which they took the Grains of Coral rounded about. No more then to thoſe that believ'd that Coral was ſoft in the place where it grows, and that it grows red and hard, when it is tak'n out of the Sea, and expos'd to the Air. For they that fiſh for it have aſſur'd me, that it neither bears Berries, nor Seed, and that it is of the ſame colour, and as hard at the bottom of the Sea in every part of the Plant, as when it is drawn up. I confeſs there are three ſorts of it, red, black, and white; but without queſtion, the red ſurpaſſes all the reſt in vertue. It muſt be of a lively colour, pure and clean, ſolid, weighty, ſmooth, and eaſie to break.

The Syrup of Coral is commended againſt all weakneſſes of the Stomach, Liver, and Bowels, and for the cure of Diſeaſes that proceed from thence, particularly to ſtay Vomitings, Diarrheas, Dyſenteries, Lienteries, Hepatic Fluxes, to ſtop the loſs of Blood in Men and Women, at Mouth, Noſe, or any other part. The Doſe is from half an ounce to an ounce, to be tak'n alone in a ſpoon, or with other convenient Liquors.

Syrupus Cydoniorum.

℞. *Succi Cydoniorum puriſſimi,*
Sacchari Albiſſimi, ana. ℞ iiij.
In vaſe fictili vitreato, lento igne, ad Syrupi Conſiſtentiam coquantur. Remotus ab igne & ſemi-refrigeratus Syrupus ſi libuerit aromatizetur Oleorum Cinnamomi & Caryophillorum an. guttii, Saccharo pulverato prius exceptis.

Syrup of Quinces.

Take equal parts, *viz.* four pints of Juice of Quinces well-clarify'd, and four pound of Sugar, and put them together into a pot of glaz'd Earth, and boil them over a ſoft fire to a good conſiſtence of a Syrup. Then take the Syrup off the fire, and aromatize with Oyl of Cinamon and Cloves, *ana* two drops, incorporated with an ounce of fine powder'd Sugar.

If you would prepare a Syrup with leſs Juice of Quinces, and by conſequence leſs aſtringent. You may prepare this Syrup in the ſame manner as that of Lemons, and put but one pint of Juice of Quinces to two pound of Sugar. But becauſe aſtriction is chiefly expected from the fore-going Syrup, the quantity of the Juice muſt be eqnal to that of the Sugar, according to the preſcription. For thereby the Juice finding it ſelf concenter'd and deſpoil'd of the greateſt part of its ſuperfluous moiſture in the boiling, which was neceſſary to bring it to the conſiſtency of a Syrup, renders it more aſtringent, and fit for the uſe to which it is deſign'd.

The vertues of it being to reſtore the weakned force of the Stomach, to ſtay vomiting, to help Digeſtion, to create an Appetite, to digeſt bad humours, and to fit them for expulſion. It ſtrengthens the Bowels, and is us'd with ſucceſs in Lienteries, Diarrhœa's, and all ſorts of Fluxes of the Belly, caus'd by acrimonious humours, or weakneſs of the Parts. The uſual Doſe is an ounce. It may be tak'n alone, or mixt in Potions, or in a Ptiſan to drink at any time.

Syrupus Antepilepticus, D. D. D' *Aquin.*

℞. *Viſci Querci*
Radicis Pæoniæ majoris,
Seminis ejuſdem, ana. ℥ ij.
Radicis Valerianæ majoris,
Angelicæ,
Imperatoriæ,
Iridis Illyricæ,
Dictamni Alb. ana. ℥ j.
Foliorum Betonicæ,
Rutæ,
Florum Lillii convallium,
Tiliæ, &
Lavendulæ, an. *M. j.*
Tartari Alb. Monſpelienſis pulverſati, ℥ jß.

Syrup againſt Epilepſie, D. D. D' Aquin.

℞. Miſletoe of the Oak,
Roots of bigger Piony,
Seed of the ſame, *an.* ℥ ij.
Roots of the bigger Valerian,
Angelica,
Maſterwort,
Illyrian Orrice,
White Dittany, *an.* ℥ j.
Leaves of Betony,
Rue,
Flowers of the Lilly Convally,
Linden-tree, and
Lavender, *an.* *M. j.*
White Tartar of *Montpelire* pulveriz'd. ℥ jß.

Bruiſe the Miſletoe, as alſo the Roots and ſeeds of Piony, beat the Tartar in a Mortar, ſhred the Leaves of Betony and Rue, and put them together with the Flowers into a Matraſs of a ſufficient bigneſs. Then pour upon them three pints of the diſtill'd Water of black-Cheries, and as much of the Water of the Flowers of the Linden-Tree, and ſtopping up the Matraſs keep it twenty-four hours in a luke-warm *Balneum Mariæ*; then let the Bathe boyl two or three hours. After which having drain'd and ſqueez'd the whole, clarifie the Liquor with the white of an Egg, mixt with four pound of Sugar, and boyl it to the conſiſtency of a Syrup, which done, aromatize it with Oyls of Cinamon and Lavender, *an.* three drops, and keep the Syrup in a Glaſs-bottle.

This

This Syrup is not only proper for the Epilepsie for which it is design'd, but for all Diseases of the Brain. The usual dose is one ounce alone, or in some Cephalic-liquor. It may be mingl'd also in Potions, Opiates, and many other Liquors.

Syrupus Hydragogus, D. D. D'AQUIN.	*A Syrup to draw forth watry humours, by Monsieur* D'AQUIN.
℞. *Radicum Mechoachan,*	℞. Roots of Mechoacan,
Ireos Nostratis,	*French*-Orrice,
Ebuli Recentis,	Vulgar Dwarf-Elder,
Medullæ Seminis Carthami,	The Pulp of the Seed of Carthamum,
Folliculorum Sennæ Orientalis,	Seed-Bag of Eastern Senna,
Foliorum Soldanellæ siccorum, an. ℥ j ß.	Dry-leaves of Sea-Bindweed, *ana.* ℥ j ß.
Turbith Gummosi,	Gummie-Turbith,
Hermodactylorum,	Hermodactyles,
Jalapæ,	Jalap,
Rhei Electi, an. ℥ vj.	Pick'd Rhubarb, *an.* ℥ vj.
Radicum Valerianæ major.	Roots of the Bigger Valerian,
Eringii,	Eringo's,
Enulæ Campanæ,	Elecampane,
Assari,	Asarabacca,
Corticis Rad. Capparis,	The Bark of the Root of Capers,
Tamariscí,	Tamarisk,
Santali Citrini,	Yellow-Saunders,
Seminis Ebuli,	Seed of Dwarf-Elder,
Baccarum Juniperi, an. ℥ ß.	Juniper-Berries, *an.* ℥ ß.
Foliorum Ceterach,	Leaves of Ceterach,
Agrimoniæ,	Agrimonie,
Chamædryos,	Germander,
Florum Geniстæ, an. M. j.	Flowers of Broom, *an.* M. j.
Limaturæ Chalybis nodulo inclusæ,	Filings of Steel ty'd in a Bag,
Tartari alb. Monspel. contusi, an. ℥ ij.	White *Montpelier*-Tartar, *an.* ℥ ij.

Break the Yellow-Saunders, bruise the Roots, Barks, Berries and Seeds, beat the Tartar in a Mortar, shred the Senna-bags, put the Filings of Steel in a little Linnen-cloth slightly ty'd, and having put them all into a Cucurbit of Earth well-glaz'd within, mingle the Flowers with the rest. Then pour upon them two pints of Succorie-water, and of the Juices of the Roots of Elder, and Leaves of Chervil well-clarify'd, of each three pints, so that the Ingredients may steep in the Liquors; cover the Cucurbit, and set it over hot embers for four and twenty hours; at the end whereof boil the whole for an hour and a half. Then drain and squeeze them strongly out, and having clarify'd the Liquor with the white of an Egg with 4 pound of fine Sugar, boil it again over a soft fire to the consistency of a Syrup, adding at the end of Tartar-vitriolized and Sal-Polychrestes, *ana* ℥ ij. When it is cold, aromatize it with three drops of Distill'd-oyl of Cinnamon incorporated with an ounce of fine-powder'd Sugar.

Eastern-Senna is accounted the best; the Leaves are like those of bastard-Senna, but more pointed and longer. The least bruis'd, the freeest from sprigs and dead leaves is always the best: it ought to be of a pale-green colour, soft to feel, of a strong scent, but not displeasing. The Flowers are small and yellow, like those of Bastard-Senna. The Seed-bags are the Cods, which the Plant produces, flat, light, like a half-Moon, broad and long, about half a finger's breadth, of a pale-green colour inclining to red. They contain the Seed, pale-green, long and flat, resembling a Heart. But the Bags are more purgative then the Leaves, and more proper to purge Waters.

Turbith is the Bark of a Milkie-root, which is chos'n by its weight, dark-colour'd without, white within, and clean from its pith, which is hard and fibrous. The mark of Gum is but fictitious and added to it; for that little Gum that is in it cannot be perceiv'd till the Turbith in powder has been macerated in Spirit of Wine, and so dissolv'd and separated from its grosser parts.

Mechoachan is a great and almost insipid Root, of an ash-colour without, whitish within, brought in slices from *New-Spain*, where it grows in the Island of *Mechoacan*. The newest is to be chos'n.

A Hermodactyle is a little Root made like a Heart, reddiſh without and very white within; of a heavy and cloſe Subſtance, but eaſily powder'd, about the bigneſs and ſomewhat reſembling *Anacardium*, or the Roots of *Satyrion*: The whiteſt, fulleſt grown, and without Worm-holes is to be chos'n.

Jalap grows in *New-Spain*. A Root about the bigneſs of Mechoacan. It is brought to us in little round pieces, of which the neweſt, moſt weighty, and gummy are the beſt.

The beſt Rhubarb is of a firm-wheighty Subſtance, ſpotted with red when it is brok'n, of a bitter-aſtringent taſte, and a good ſcent.

They that will be ſo curious as to examine the qualities and quantities of all the Simples preſcrib'd by the Chief *Phyſician* to his Majeſty of *France*, for the Compoſition of this Syrup, will have no reaſon to queſtion the vertue thereof in purging ſerous humours from all parts of the Body, particularly Hydropical, for the cure whereof it was chiefly ſtudy'd.

It may be giv'n alone from one ounce to two in proper Liquor.

Syrupus Anti-Nephriticus, D. D. *D'AQUIN.*

℞. *Radicum Altheæ,*
Ononidis,
Fragariæ,
Bardanæ,
Nymphææ,
Quinque Aperientium, an. ℥ j ß.
Fructuum Alkekengi,
Cynosbati, an. ℥ iij.
Seminum Bardanæ,
Milii Solis,
Sileris montani,
Quatuor Frig. major mundat.
Nucleorum Meſpillorum & Perſicorum, an. ℥ j.
Foliorum Saxifragæ,
Pimpinellæ,
Cerefolii,
Virgæ Aureæ,
Hyperici,
Capilli Veneris, an. M. j.
Tart. albi pulverati, ℥ ij.

A Syrup againſt Gravel, and pains in the Kidneys, by D. D'AQUIN.

℞. Roots of Althea,
Reſt-Harrow,
Straw-berries,
Burdock,
Water-Lilly,
Five Openers, *an.* ℥ j ß.
Fruit of Alkekengi,
Sweet-Bryer, *an.* ℥ iij.
Seeds of Burdock,
Grommel,
Lovage,
Four Greater Cold-ſeeds cleans'd,
Kernels of Medlars and Peaches, *an.* ℥ j.
Leave of Saxifrage,
Pimpernel,
Chervile,
Gold'n-Rod,
St. *John*'s-wort,
Maidenhair, M. j.
White Tartar pulveriz'd, ℥ ij.

After you well waſh'd and cleans'd all the Roots from their external and internal ſuperfluities, and bruis'd and ſlic'd them well, put them into an Earth'n-pot glaz'd within-ſide, with two ounces of *Montpelier*-Tartar pulveriz'd; and having pour'd upon them ten pints of the Diſtill'd-water of Pellitory of the Wall, let them boil over a ſoft fire for the ſpace of a good hour: After which add to the Decoction the Fruits of Sweet-Bryar and Alkekengi well-cut, and boil them a quarter of an hour among the Roots; then add to them the Seeds of Burdock, Grommel and Lovage, ſlightly pounded, and the Leaves of Chervile and St. *John*'s-wort cut. Boil the whole about a quarter of an hour, after which put in the Maidenhair; and having put them down into the Decoction, cover the Pot, take it off the fire, and when the Decoction is half-cold, drain and ſqueeze it out. Then clarifie the Liquor with the white of an Egg with four pound of fine Sugar, and boil them over a ſoft fire to the conſiſtence of a Syrup. When it is cold, aromatize it with ſix drops of Diſtill'd-oyl of Aniſe, incorporated with an ounce of fine-powder'd Sugar, and put up the Syrup in a Bottle well-ſtopp'd.

The Diuretic vertues particularly known to belong to every one of the Simples made choice of for the Compoſition of this Syrup, demonſtrate the good effects which may be expected from their union. Nor can we otherwiſe believe but that this Syrup will give conſiderable eaſe to thoſe that are troubl'd with Gravel in their Reins, Ureters or Bladder, or any thick or viſcous flegm, which ſtopping the Urinary-pipes, ſtops the ordinary courſe of the Water; or to thoſe that are ſubject to relapſe into theſe Diſtempers.

pers. For prevention whereof, let them continue the use of this Syrup for several days, taking every morning an ounce in three or four ounces of white-wine. In the pains take from an ounce to two ounces in Emulsions or any other Liquors.

Syrupus de Absinthio.

℞. *Summitatum Absinthii majoris Sccarum*, ℔ ß.
Rosarum rubrarum exungulatarum,
Tartari albi Monspelienſis, an. ʒ *ij.*
Nardis Indicæ, ʒ *iij.*
Succi Cydoniorum nondum perfectè maturorum,
Vini albi austeri, an. ℔ *iij* ß.

Syrup of Wormwood.

℞. The tops of Wormwood gather'd when it is in flower, and dry them, half a pound; red-Roses cleans'd from their white bottoms, two ounces; *Indian*-Nard three Drachms: put them all into a Vessel of Earth glaz'd within-side, having a narrow mouth, and then adding two ounces of *Montpelier*-Tartar, pour upon them of the Juices of Quinces not perfectly ripe, and austere white-wine, of each three pints and a half. Then with a woodd'n-Spatula thrust down the Wormwood, Roses and Spikenard into the Liquors, and having cover'd the Vessel, set it upon hot embers for 24 hours. Then boil the Ingredients gently till the Liquors be a third part consum'd. Drain and press out the Decoction, and clarifie it with the white of an Egg and four pound of Sugar, and boil them over a gentle fire to the consistence of a Syrup a little thicker then ordinary. Let the Syrup cool, and then mix with it half a Drachm of Oyl of Wormwood, incorporated with two ounces of powder'd Sugar; or else with two ounces of the tincture of the tops of Wormwood drawn with the Spirit of Wine. Then keep the Syrup in a Bottle well-stopp'd.

Here give me leave to answer the objections some have made against the preparations of this Syrup. For they say, That in the Decoction of the Wormwood, Roses and Spikenard, their volatile parts dissipate with the spiritous part of the Wine; and that to preserve them, the Infusion and Decoction of this Syrup must be made in a Cucurbit of glass, cover'd with its Head in a Sand-bath, and that the ten first ounces of the Distill'd-waters must be kept a-part, as also the two next pints that follow, continuing the Distillation till there remains but one pint of moisture in the Cucurbit. Then, say they, that which remains in the Cucurbit must be prest out, and the Liquor clarify'd and evaporated till it be reduc'd to four ounces; that those 4 ounces must be dissolv'd with 2 pound of Sugar, and the ten ounces of the first Water reserv'd a-part, and that after they have boyl'd a very little while, the Syrup is made: Only the two last pints of the second Water must be reserv'd to mingle with the Syrup, when occasion requires.

The dissipation of the volatile parts of the Wormwood, Roses, and Spikenard with the Wine, seems at first a specious Argument. But upon examination, we shall find that the Remedy propos'd is worse then the mischief sought to be prevented, besides the trouble of the Preparation. For, besides that the volatile parts, the loss whereof is so much fear'd, are not such as the design of the Syrup requires, which is principally to strength'n the Stomach, Liver and Bowels, which is the office of the material and grosser parts of Medicaments, and chiefly of their fix'd salt, you shall find a greater dissipation of the good parts in the preparation of these Authors, then in that of the Ancients. For though they keep the first ten ounces of the Distill'd-water, they take away two pints of that which follows next, the vertue whereof is no more to be found in the Syrup. Then again, they dissipate many of the considerable parts by clarifying the rest of the Decoction, and causing it to evaporate to four ounces, whereby it is impossible to concenter the vertues of so many ingredients, especially for one Syrup. Then the boyling, how soft soever, which afterwards they allow the Syrup to unite the four ounces of the first Water, carries off the most subtle parts

of

of the Spiritous-water, which they took ſo much care to preſerve. Whereby the deficiency of their Preparation eaſily appears.

Yet I muſt confeſs the Ancients might have done better with leſs trouble, had they gone according to the preſcription here ſet down. For though we cannot boaſt by this means to preſerve all the Spiritous parts of the Wormwood, Roſes and Spikenard, no more then thoſe of the Wine; nevertheleſs a good part are retain'd, and the addition of the Diſtill'd-oyl of Wormwood ſufficiently ſupplyes the defects of thoſe Spirits which the Wormwood loſt in Diſtillation. Beſides all this, the green-ſowre-wine, which we uſe inſtead of the ripe-wine preſcrib'd by the Ancients, the unripe Quinces, and the Tartar being order'd as we have done, the Acid part which abounds in all theſe, uniting with the fixt Salt of the Tartar it ſelf, will ſtop the motion of the greateſt part of the volatile Spirits which were ſubject to diſſipation, and enable them to reſiſt the heat of the Infuſion and Decoction. And theſe volatiles thus retain'd, finding themſelves joyn'd to the terreſtrial and fix'd parts of the other Medicaments, will be able to ſecond and aſſiſt their operation: which they will do more powerfully, when they meet with the ſulphurie parts of the Diſtill'd-oyl of Wormwood.

But to ſatisfie thoſe who believe that all the ſpiritous part of Wine is abſolutely neceſſary in this Syrup, and fear that the Coction may have diſſipated ſome parts; That diſſipation may be ſupply'd by adding to the Syrup, boyl'd a little more then ordinary and cold again, two ounces of the Tincture of the tops of Wormwood, drawn with the Spirit of Wine. Which re-inforc'd by the Oyl, will render the Syrup much more effectual.

If the Greater Wormwood be too bitter, you may may make uſe of the Leſſer for Perſons that are more nice, obſerving ſtill the ſame Preparation.

Spikenard is brought from the *Eaſt-Indies*. It is a Root that ſhooteth up many hairy-ſpikes ſet together of a browniſh-colour. There is nothing appears above the ground but the ſtalk, for the ſpikes grow even with the Earth, about an inch and a half long, of a ſtrong ſcent, like that of *Galingale*, the taſte whereof is bitter and biting.

Syrup of Wormwood ſtrength'ns the Stomach and Liver, creates an Appetite, helps digeſtion, kills Worms, corrects the acidities of the Stomach, expels winds, fortifies the Bowels, ſtops Looſeneſs, and is profitable in Hyſteric-diſtempers. The doſe is one or two ſpoonfuls in a morning faſting, either unmix'd, or in Wine, or any other proper Liquor. It is alſo us'd in Potions, Opiates, Pills, and ſeveral other Medicaments.

Syrupus de Althæa.

℞. *Radicum Althææ*, ℥ *ij.*
Graminis,
Aſparagi,
Glycyrrhizæ,
Uvarum paſſarum,
Cicerum rubrorum, an. ℥ *j.*
Summitatum Althææ,
Malvæ,
Parietariæ,
Pimpinellæ,
Adianti vulgaris,
Capilli Veneris Monſpelienſis, an. *M. j.*
Quatuor Semin. frigid. Minorum, & Majorum, an. ℥ *ij.*

Syrup of Marſh-mallows.

℞. Roots of Marſh-mallows, ℥ ij.
Meadow-graſs,
Aſparagus,
Liquorice,
Raiſins of the Sun,
Red Cich-peaſe, *an.* ℥ j.
Tops of Althea,
French-Mallows,
Pellitorie of the wall,
Pimpernel,
Common Maidenhair,
Monpelier-Maidenhair, an. M. j.
Four Leſſer Cold-ſeeds
Greater, *an.* ℥ ij.

Waſh and cleanſe the Roots of Althea, Aſparagus and Meadow-graſs, from their dirt, pith and ſtrings, ſlice them well; and having boil'd the Graſs-roots a good quarter of an hour firſt in 8 pints of Water, put into the Decoction the ſlic'd-roots of Althea and Aſparagus, and let them boil ſoundly for half an hour; then add the dry Raiſins cut, and the Cich-peaſe whole; when they have boil'd a little while, put in the tops of the Mallows, Althea, Pellitorie and Pimpernel ſlightly ſhred, and boil them about a quarter of an hour among the reſt: after that add the Liquorice ſlic'd, and the Maidenhairs cut, and when they begin to boil, put in the Cold-ſeeds: thruſt them down into the Decoction, and take the whole off the fire, and let them drain a quarter of an hour afterwards. Then clarifie the Liquor with the white of an Egg and four pounds of

of Sugar, and let them boil over a moderate fire to the consistence of a Syrup, a little more then ordinary. Stir the Syrup softly from time to time, the better to evaporate the superfluous moisture, and put up the Syrup when it is quite cold.

This Preparation differs from that of *Fernelius* and some other Writers; the quantity of the Roots and Raisins being here chang'd from half an ounce to an ounce; the Plantain is left out, and eight pints of Water prescrib'd instead of six. All which quantities are too small for four pound of Sugar. And Plantain known to be an astringent herb, is not to be admitted among opening, slippery-making Roots. And ten pints of Water are but little enough to extract the vertues of so many Medicaments, and yet retain the just consistence of a Syrup.

Some think this Preparation impossible, by reason of the viscosity of most of the particular Ingredients; but they that observe my method, will find not only the possibility, but the success which they suspect.

The Cich-pease are prescrib'd whole, because their opening quality abounds enough without-side without being brok'n: which if they should be, their terrestrial part being op'n, might prevail above their aperitive Faculty.

Some would have the Roots, Herbs, and other Ingredients put into a little Bag, and so boil'd, believing their Mucilaginous part would remain in the Bag; by which means the Syrup would be less viscous, and more easily prepar'd. But the difference of the Substances requires different degrees of boiling; and therefore it would be ill-done to boil them one among another equally, whereby the vertue of the one might be dissipated before the vertues of the other were fully imparted to the Liquor: besides that there be others whose terrestial parts would remain in the Syrup, especially the Cich-pease. And then again, though all the Ingredients were of the same nature, it would be a difficult thing for them, being so stopp'd up, to communicate their vertue equally; which in regard it could not be done otherwise then by squeezing the Ingredients, would render the Syrup more mucilaginous.

Syrup of Althea is very much esteem'd for discharging the Reins and Ureters of gravelly-flegmatic and tenacious Substances. For it moderately op'ns and makes all the passages slippery; tempers the shapness of them, as well as of the Urine it self: and cools the heat that burns in the passages. It is no less commended in Diseases of the Brest, and *Gonorrhea's*. It is to be tak'n fasting, alone, or in Decoctions, Emulsions, Whey, White-wine, *&c.* The usual dose is an ounce, though you may take two upon occasion.

Syrupus Aperiens Cachecticus, D. D. *D'Aquin.*

℞. *Radicum Apii,*
Fœniculi,
Petroselini,
Rubiæ Tinctorum,
Aristolochiæ tenuis, an. ℥ij.

An Opening Syrup against ill-habit of Body, by Monsieur D'Aquin.

℞. Roots of Parsly,
Fennel,
Stone-Parsly,
Dyers-Madder,
Thin-Birthwort, *an.* ℥ij.

Wash and cleanse the Roots of Parsly, Fennel, Stone-Parsly, Madder and Birthwort, and having bruis'd them and put them into an Earth'n-vessel glaz'd within, with a streight mouth, moist'n them with Vinegar of Squills, and having cover'd the Pot, keep them in maceration 24 hours in some hot place, as over a Baker's Oven; then let them boyl over a gentle fire in eight pints of water, where Steel has been quench'd, to the consumption of the fourth part. Then

℞. *Foliorum Arthemisiæ,*
Absinthii,
Agrimoniæ,
Pulegii,
Chamædryos, an. M.j.
Rutæ, Mß.

℞. The Leaves of Mugwort,
Wormwood,
Agrimonie,
Penny-royal,
Germander, *an.* M. j.
Rue, Mß.

Shred them and put them in, and when they have boyl'd about a quarter of an hour among the Roots, add thereto

Injice,

Injice, Epithymi,		Dodder of time,	
Florum Matricariæ,		Flowers of Featherfew,	
Chamomillæ,		Camomile,	
Hyperici, an.	*P. ij.*	St. *John*'s-wort, *an.*	Little Handfulls, ij.

After ſome few bubblings, take it off the fire, ſtrain and ſqueeze out the whole; clarifie the ſtraining with five pound of Sugar, and boyl them over a gentle fire to the conſiſtence of a Syrup.

Si purgantem cupias,		If you deſire it purgative, boyl it ſtill to the conſiſtence of a ſoft Electuary. Then	
℞. *Rhabarbari electi minutim inciſi,*		℞. Choice Rhubarb ſmall cut,	
Foliorum Orientalium, an.	℥ ij.	*Indian*-Leaves, *an.*	℥ ij.
Radicum Jalapæ,		Roots of Jalap,	
Mechoachanæ,		Mechoachan,	
Hermodactilorum, &		Hermodactyles, and	
Brioniæ albæ contuſarum, an.	℥ j.	White Bryony bruis'd, *an.*	℥ j.
Tartari Vitriolati,	℥ vj.	Tartar-vitrioliz'd,	℥ vj.

Infuſe all theſe in a Glaz'd-earthen-veſſel for four and twenty hours over hot embers in three pints of Balm-water, and let them boyl about a quarter of an hour. Strain and preſs out the Infuſion, and clarifie the Liquor. Then mixe it with the Syrup boyl'd to the conſiſtence of a ſoft Electuary, and boyl it again to the conſiſtence of a Syrup. When it is cool, aromatize it with four drops of Oyl of Cinamon incorporated with half an ounce of fine Sugar, or with as much of the Tincture of Saffron; then put it up and ſtop it well.

This Syrup is a collection of choice Medicaments, which has had good ſucceſs in opening obſtructions of the Liver, Spleen, Meſenterie and Matrix. It purges gently viſcous and tenacious humours, which are the original of Cachexies, Dropſies and quotidian Agues. It is very proper to cure pale Complexions, and againſt ſuppreſſion or irregularity of the *Menſtruum's*. And though the Chalybeat-water does but a very little matter augment the vertue of the Syrup, yet you may re-inforce it with Tincture, Salt or Vitriol of Mars, if there be occaſion.

Either of theſe Syrups the firſt or the Purgative, may be tak'n alone, or mix'd with Diſtill'd waters or White-wine, or any proper Decoction, from one ounce to two.

Syrupus de Arthemiſia.

℞. *Radicum Apii,*		
Fœniculi,		
Petroſelini,		
Enulæ Campanæ,		
Ireos Noſtratis,		
Pæoniæ, &		
Rubiæ major, an.	℥ j.	
Foliorum Arthemiſiæ,		
Pulegii,		
Calaminthæ,		
Origani,		
Meliſſæ,		
Dictamni Cretici,		
Sabinæ,		
Perſicariæ,		
Majoranæ,		
Chamædryos,		
Chamæpityos,		
Hyſſopi,		
Hyperici,		
Rutæ,		

Syrup of Mugwort.

℞. Of the Roots of Parſly,		
Fennel,		
Stone-Parſly,		
Elecampane,		
French-Orrice,		
Peonie, and		
The Bigger Madder, *an.*	℥ j.	
Leaves of Mugwort,		
Peny-royal,		
Calaminte,		
Organy,		
Balm,		
Cretan-Dittany,		
Savine,		
Arſmart,		
Marjoram,		
Germander,		
Ground-Ivy,		
Hyſſop,		
St. *John*'s-wort,		
Rue,		

Matri-

Matricariæ floridæ,		Double Featherfew,	
Centaurii minoris,		Leſſer Centaurie,	
Betonicæ,		Betonie,	
Praſſii albi, an.	*M. j.*	White-Horehound, *an.*	M. j.
Seminum Aniſi,		Seed of Anniſe,	
Fœniculi,		Fennel,	
Dauci,		Wild-Carrot,	
Petroſelini,		Stone-Parſley,	
Ocymi,		Baſil,	
Rutæ, an.	℥ iij.	Rue, *an.*	℥ iij.
Tartari albi Monſpelienſis,	℥ ij.	Tartar white of *Montpelier,*	℥ ij.

Waſh, cleanſe and bruiſe all the Roots, and infuſe them with the Tartar pulveriz'd four and twenty hours over hot embers in an Earth'n-glaz'd-veſſel well-cover'd, in three pints of clear Hydromel newly made. Cut the Herbs and bruiſe the Seeds, and put them in another Earth'n-glaz'd-pot by themſelves in ten pints of the ſame Hydromel, covering the Pot and ſetting it upon hot embers for twelve hours. Then boyl the Infuſion of the Roots over a gentle fire for half an hour. Having ſo done, mixe the Infuſion of the Herbs with it, and boyl both together for a good quarter of an hour. After that take the Decoction from the fire, and when it is half-cold, ſtrain and ſqueeze it well, and having clarify'd the Liquor with the white of an Egg in five pounds of Sugar, boyl them over a moderate fire to the conſiſtence of a Syrup, and aromatize it with ſix drops of Diſtill'd-oyl of Cinamon, incorporated with an ounce of fine powder'd Sugar. But this mixture muſt not be made till the Syrup be quite cold.

Hydromel is preferr'd before Water and the powder'd Tartar added, as well the better to penetrate the Ingredients, as to bind their volatile parts, and to hinder diſſipation during the Decoction. The Aromatization of the Syrup with Oyl of Cinamon is beyond the method of the Ancients, who were wont to boyl the Cinamon in their Decoctions, not conſidering that the ſulphurie and volatile parts of the Cinamon diſſipate in boyling, and leave in the Decoction only ſome terreſtrial parts of the Cinamon, inferior to the ſmell and ſharp and penetrating taſte of the Oyl of Cinamon.

The Preparation of this Syrup is different from thoſe which may be met with in ſeveral Pharmacopœas: But you will find that the change is much for the better, and that I have obſerv'd the beſt rules of *Pharmacy*.

This Syrup is chiefly made uſe of in the Diſeaſes of Women: to op'n obſtructions of the *Matrix*, to diſpel Wind, to repreſs vapours and to quiet ſuffocations, as alſo to provoke and regulate the *menſtruum's*, and evacuate the impurities of the *Matrix*. It is good againſt obſtructions of the Spleen, Liver and Bowels, as well for Men as Women. The doſe is from one ounce to two, alone, or in White-wine, in Opening-waters or Decoctions. It is alſo ſometimes mixt in Pills, Opiates and other Medicines.

Syrupus de Cichorio compoſitus cum Rhabarbaro.

Syrup of Cichorie compounded with Rhubarb.

℞. *Hordei integri,*		℞. Whole Barley,	
Radicum Apii,		Roots of Parſly,	
Fœniculi,		Fennel,	
Aſparagi,		Aſparagus,	
Tartari albi crudi, an.	℥ ij.	Raw white Tartar, *an.*	℥ ij.
Foliorum Cichorii,		Leaves of Cichorie,	
Taraxaci,		Dandelion,	
Endiviæ,		Endive,	
Sonchi Levis,		Smooth Sow-thiſtle,	
Lactucæ Sativæ, &		Gard'n-Lettice, and	
Sylveſtris Spinas in dorſo ferentis,		Wild-Lettice with prickles,	
Hepaticæ,		Liverwort,	
Fumariæ,		Fumitorie,	
Lupuli, an.	*M. j.*	Hopps, *an.*	M. j.
Capill. Ven. Monſpelienſis,		*Venus*-Hair of *Montpelier,*	
Polytrici,		Gold'n-Maidenhair,	

Adianti

Adianti vulgaris,		Common-Maidenhair,	
Ceterach,		Spleenwort,	
Glycyrrhizæ,		Liquorice,	
Baccarum Alkekengi,		Alkekengi-Berries,	
Seminis Cuſcutæ, an.	ʒ vj.	Dodder-ſeed, *an.*	ʒ vj.

Firſt boil the Barley whole with the Tartar beat'n to powder in ten pints of Water for half an hour, then adding the Roots of Parſly, Fennel and Aſparagus, well-cleans'd from duſt and pith, and ſlic'd or bruis'd, let them boil another half hour; next put in the Alkekengi-Berries bruis'd, and the Herbs cut, and boil them a quarter of an hour among all the reſt: After that put in the Liquorice cleans'd and ſlic'd, the Dodder-ſeed, and the Maidenhairs, and having let them boil a little while, take the the Decoction from the fire, and when it is half-cold, ſtrain and preſs it forth. Clarifie it with the white of an Egg with ſix pound of Sugar, and boil it over a moderate fire to the conſiſtence of a Syrup between ſoft and ſolid.

Interim,		In the mean time,	
℞. *Rhabarbari electi inciſi,*	ʒ *vj.*	℞. Of choice Rhubarb cut,	ʒ vj.
Tartari albi Monſpel.	ʒ *j.*	White Tartar of *Montpelier,*	ʒ j.
Spicæ Nardæ,	ʒ *vj.*	Spikenard,	ʒ vj.

Infuſe them in three pints of the Diſtill'd-water of Succorie in an Earth'n-glaz'd-pot, narrow-mouth'd and well-cover'd over hot coals for 24 hours; then let them boyl a few bublings, and having ſtrain'd and preſs'd the whole, and clarify'd the Liquor with the white of an Egg and four ounces of white Sugar, put this to the Syrup, while it is hot; and if it be not then thick enough boyl it on to a good conſiſtence, and put it up when it is quite cold.

Some there are that reſerve a part of their Decoction to infuſe the Rhubarb and Spikenard into it. But conſidering that a Liquor charg'd with the vertue of ſo many Ingredients is not in a condition to receive a-new that of the Rhubarb and Spikenard, and that of neceſſity it muſt leave a good part in the Sediment, certainly the Succorie-water here preſcrib'd, is much more proper at this time, not being peſter'd with any other qualities than what is natural to it.

There is no Syrup more in uſe in all places then this of Succorie-compos'd: Though by what miſcarriage I know not, none of the Pharmacopœa's have yet agreed in the Compoſition. But this you may be certain is right: and by the way take notice, That the Tartar is added here alſo for the better penetration of the ſimples, to impart their vertue to the Water more effectually, and to ſtop the diſſipation of their volatile parts.

The remarquable vertues of this Syrup, have caus'd ſome to give it the Name of *The Balſom of the Liver and Spleen*, the obſtructions whereof it powerfully op'ns, as alſo of the Pancreas and Meſenterie. It is recommended againſt the Jaundice and Cachexies; as alſo to ſoft'n and diſcuſs the hardneſs and ſwelling of the Belly which happ'ns to little Children through obſtructions caus'd by the Worms. It is ſucceſsfully us'd in Apozems appointed to prepare bad humours for digeſtion, eſpecially choleric ones, and to open the paſſages neceſſary for their evacuation. It is purgative, compounded with Rhubarb, for which reaſon it is giv'n ſometimes alone to little Children, ſometimes mix'd with Purgative infuſions, eſpecially in Diarrhea's, Lienteries, Dyſenteries, and other choleric Diſtempers that harraſs the Inteſtines. And it has this good quality, that as it purges the ill-humours, it ſtrength'ns all the lower parts of the Belly. The doſe is from one ounce to two.

They that deſire a ſimple Syrup of Succorie may prepare it with equal parts of fine Sugar and Juice of Succorie depurated by ſettlement, clarify'd together with the white of an Egg, and boyl'd to the conſiſtence of a Syrup.

Syrupus Roborans.		*A Strengthning Syrup.*	
℞. *Rhabarbari elect. inciſi,*	℥ iiij.	℞. Choice Rhubarb cut,	℥ iiij.
Baccarum Myrti contuſarum,		Mirtle-berries bruis'd,	
Roſarum Rubrarum exungulatarum, an.	℥ iij.	Red-Roſes cleans'd, *an.*	℥ iij.
Tartari Alb. contuſi,	℥ j.	White-Tartar bruis'd,	℥ j.

Slice the Rhubarb, bruiſe the Berries, beat the Tartar in a Mortar, and put them with the Roſes cleans'd from their whites, into a Glaz'd-earth'n-pot with a narrow mouth, in ſix pints of Water wherein Steel has been quench'd. Cover the Pot, and ſet it over hot embers for 24 hours; then let them boil a little; which done, ſtrain and preſs the Sediment ſtrongly. Clarifie the Liquor with the white of an Egg and four pound of Sugar, and boil them up over a ſoft fire to the conſiſtency of a Syrup.

Though the Purgative-vertue of Rhubarb may not ſeem neceſſary for the purpoſes of this Syrup, yet it had been ill-left out; in regard it may, as it were, inſenſibly evacuate ſome ill-humours, while it's more terrreſtial parts aſſiſted by other Medicaments, fortifie the parts that were weaken'd and relax'd. The purpoſe of the Tartar is the ſame as before.

This Syrup is highly eſteem'd for the ſtrength'ning and reſtoring the Stomach and Liver debilitated. It is very much us'd in the cure of Diarrheas, Lienteries, Dyſenteries, and Hepatic-fluxes; it creates an Appetite, and helps Digeſtion. It is good to help the retentive Faculty of the Stomach, and in loſſes of Blood. You may take it faſting, alone, or mix'd with proper Liquors. The uſual doſe is an ounce, which you may enlarge to two.

Syrupus Myrtinus.		*Syrup of Myrtle.*	
℞. *Baccarum Myrti,*		℞. Myrtle-Berries,	
Meſpillorum ad maturitatem vergentium, &		Medlars near ripe, and	
Radicis Symphiti majoris, an.	℥ iiij.	Root of Greater Cumfrey, *an.*	℥ iiij.
Suntali Citrini,		Yellow-Saunders,	
Fructuum Oxyacanthæ recentium,		Freſh-Barberies,	
Granorum Sumach,		Seeds of Sumach,	
Balauſtiorum,		Double Flowers of wild-Pome-granates,	
&		And	
Roſarum rubrarum mundatar. an.	℥ ij.	Red-Roſes clean pick'd, *an.*	℥ ij.

Take the Myrtle-Berries dry, the Medlars when they are almoſt ripe, bruiſe them well, as alſo the Sumach-ſeeds, the Barberries, the Pome-granate flowers, the Yellow-Saunders, and the Roots of great Confrey, and putting them all together with the Roſes clean-pickt into an Earth'n-glaz'd-pot; pour upon them three pints of fair Water, and of the Juice of Quinces and wild-Pears, of each two pints. Thruſt down the Ingredients into the Liquors, cover the Pot and ſet it four and twenty hours upon hot embers, at the end whereof boyl the Infuſion a good quarter of an hour, and when it is half-cold, ſtrain and ſqueeze it ſtrongly out; and having clarify'd the Liquor with the white of an Egg with five pound of the fineſt Sugar, boyl them over a moderate fire to the conſiſtence of a Syrup.

Syrup of Myrtles cools, dries and binds, for which reaſon it is ſucceſsfully made uſe of to ſtay thin Defluxions upon the Lungs, and to ſtop the coughing which proceeds from thence. It is alſo very proper to ſtay Looſeneſſes, Spitting and vomiting of Blood, and all other internal *Haimorraghia's*. It ſtops the exceſſive flowings of the *menſtruum's*, and all want of retention in the Stomach and Bowels. It is highly eſteem'd for the cooling of Inflammations, and healing Ulcers of the Mouth, Tongue or Throat. It is tak'n alone from one ounce to two, or elſe in Diſtill'd-waters or proper Decoctions.

Syrupus Jujubinus.

℞. *Jujubas*, N°. *lx.*
Hordei mundati,
Glycyrrhizæ,
Capilli Veneris Monſpel. an. ʒ j.
Violarum recentium, *M.j.*
Seminum Malvæ,
Cydoniorum,
Papaveris albi,
Melonis,
Lactucæ, an. ʒ iij.

Syrup of Jujubs.

℞. Jujubs, N°. lx.
Barley pickt,
Liquorice,
Venus-Hair of *Montpelier, an.* ʒ j.
Freſh-Violets, M. j.
Seeds of Mallows,
Quinces,
White-Poppie,
Of Melon,
Of Lettice, *an.* ʒ iij.

Put the pickt Barley with ſix pints of Water into an Earth'n-glaz'd-pot, and let it boyl over a gentle fire for a good half hour; then put in the Jububs ſlic'd, and let them boyl a good quarter of an hour; then add the Liquorice ſcrap'd and bruis'd, the *Venus*-Hair cut, and the Seeds bruis'd, and let them bubble a while. Then add the freſh-Violets, thruſting them down into the Decoction, at the ſame time taking off the Pot from the fire; and when the Decoction is ſomewhat cool, ſtrain it, and having clarify'd the Liquor with the white of an Egg with three pound of fine Sugar, boyl it over a gentle-fire to the conſiſtence of a Syrup.

Should the Decoction of the Ingredients preſcrib'd for the making of this Syrup be made without regard had to the viſcoſity of the Seeds, and without following exactly the order to be obſerv'd in the boyling, it would be ſo clammy that the Syrup could never keep long. Much leſs would it keep, and much more irregular would the conſiſtence be, if as the Ancients did, you ſhould add Gum-Tragacanth. For two drams of that Gum were enough to make it as thick as a Looh, and keep it from being tranſparent. But obſerving my method, the vertue which is requir'd in the Ingredients, will not fail to remain in the Syrup, and the conſiſtence will be proper.

Syrup of Jujubs is chiefly made uſe of for Perſons that are troubl'd with a dry cough, and are troubl'd with hot and thin Defluxions upon the *Aſpera Arteria* or Rough Arterie, or upon the Lungs; for it thick'ns thin flegm, and qualifies the acrimonie thereof, and helps to expectorate. It is tak'n from half an ounce to an ounce, alone, or elſe in Pectoral-Ptiſanes, Juleps, Apozems, or mix'd with Looches.

Syrupus Florum Tuſſilaginis Simplex.

℞. *Florum Tuſſilaginis recentium*, ℔ j ß.

Simple Syrup of Flowers of Colts-foot.

℞. Freſh Flowers of Colts-foot, ℔ j ß.

Put the Flowers into an Earth'n-pot glaz'd within, having a ſtreight mouth; and covering the Pot, ſet it upon hot cinders for twelve hours, at the end whereof give the Infuſion ſome few bubling-boilings, ſtrain it and preſs it out. Then putting the like quantity of freſh Colts-foot Flowers into the ſame Pot, pour upon them the ſtrain'd Liquor. Cover the Pot and ſet it upon the hot embers, as long as before; then letting the Infuſion boyl a little, ſtrain it, ſqueeze it, and clarifie the Liquor with the white of an Egg with four pound of fine Sugar, and let it boyl over a ſoft fire to the conſiſtence of a Syrup.

The Syrup of Flowers of Colts-foot is highly extoll'd to cut and loos'n tough-flegm from the rough Artery and Lungs, for which reaſon it gives great eaſe to thoſe that are Aſthmatic, and ſuch as cannot freely breath. It is tak'n alone by intervals faſting, from two drams to half an ounce. It is alſo mix'd in Looches, and Pectoral Ptiſanes.

Syrupus de Tuſſilagine Compoſitus.

℞. *Radicum Tuſſilaginis*, ℔ ß.
Foliorum & florum ejuſdem, an. *M.iiij.*
Capilli Veneris Monſpel. *M. ij.*
Glycyrrhizæ. ʒ j.
Aquæ Fontanæ, ℔ *viij.*

Compound Syrup of Colts-foot.

℞. Roots of Colts-foot, ℔ ß.
Leaves and Flowers of the ſame, *an.* M.iiij.
Montpelier Venus-Hair, M. ij.
Liquorice, ʒ j.
Fountain-water, ℔ viij.

Gather

Gather the Roots toward the end of Winter, the same Flowers and Leaves, when they are shot forth. Dry the Roots and Flowers, and keep them till the Leaves are ready. Then bruise the Roots well, and boil them for half an hour in eight pints of Fountain-water. Then adding the Leaves cut, let them boil a quarter of an hour with the Roots. Then put in the Liquorice scrap'd and bruis'd, the Venus-hair cut, and the Flowers. Give them a gentle boiling, and at the same time take off the Decoction from the fire. Strain it and press it when it is a little cool. And having clarify'd the Liquor with the white of an Egg with five pound of the finest Sugar, boil it to the consistency of a Syrup, a little thicker then ordinary, by reason of the viscosity of the Colts-foot.

The different substance of the Ingredients that compound this substance, require different spaces of boiling: so that we cannot either infuse or boil them all together at the same time, unless we should despise the principal rules of *Pharmacy*, which teach us to begin our Decoctions and Infusions with the most solid Medicaments.

The same vertues may be attributed to this Syrup, as to the former; only we may believe that it acts with more force, by the Conjunction of the Roots and Leaves of Colts-foot, the Liquorice, and the Maiden-hair. But in lieu of that, it is somewhat more unpleasant. The Dose and use is much the same.

Syrupus Antiasthmaticus, D. D. D'*AQUIN*.

℞. *Hordei Mundati,*	℥ ij
Radicum Petasitidis,	
Enulæ Campanæ,	
Apii	
Fæniculi	
Liquoritiæ, &	
Uvarum Damascenarum Mundatarum, an.	℥ j ß.
Dactylos Enucleatos	N°. xij.
Jujubas,	
Sebesten, ana.	N°. xxx.
Foliorum Tussilaginis,	
Pulmonariæ,	
Summitatum Hyssopi,	
Prassii Albi,	
Capill. ven. Monspel. an.	M. j.
Seminum Anisi,	
Bombacis, an.	℥ ß.
Florum Tussilaginis,	
Pedis cati, an.	M. ß.

An Anti-Asthmatic Syrup of Monsieur D'AQUIN.

℞. Pickt Barley,	℥ ij.
Roots of Butter-Bur,	
Elecampane,	
Parsley,	
Fennel,	
Liquorice, and	
The best and biggest sort of Raisins of the Sun, *an.*	℥ j ß.
Ston'd Dates,	N°. xij.
Jujubs,	
Sebestens, *an.*	N°. xxx.
Leaves of Colts-foot,	
Lungwort,	
Tops of Hysop,	
White Hore-hound,	
Montpelier Maiden-hair, *an.*	M. j.
Seeds of Anise,	
Cotton-Tree, *an.*	℥ ß.
Flowers of Colts-foot,	
Cats-foot, *an.*	M. ß.

Boyl the pickt Barley half an hour in nine pints of Water, then adding the Roots cleans'd and cut, boil them half an hour longer: next put the Dates ston'd and cut, with the Jujubs, Sebestens, and Raisins ston'd, and having boyl'd them among the rest, for a quarter of an hour, put in the Herbs shred, and let them boil another quarter; add then the Liquorice and Seeds bruis'd, the Maiden-hair and Flowers, and after some few bublings, take the decoction from the fire. Strain it being somewhat cool'd. Then clarifie the Liquor with the white of an Egg and five pound of fine Sugar, and boil it over a gentle fire to the consistence of a Syrup.

This Syrup is very proper to cut and loosen cold, viscous and tough flegm, from all the parts serving to respiration. It principally helps those that are Asthmatick, and those that are troubled with inveterate Coughs, for it opens the passages and removes the flegm that stops them. It may be call'd the Balsom of the Brest, and particularly for old Men. Take a spoonful at a time every foot by night or day, so that you may be said to be fasting, and continue it as occasion requires.

Syrupus

Syrupus Reſumptivus, ſive de Teſtudinibus.

℞. *Carnis Teſtudinum Nemoralium,* ℔ j.
Cancrorum fluviatilium ʒ viij.
Hordei Mundati,
Carnis Dactylorum &
Paſſularum Damaſcenarum, an. ℥ ij.
Jujubas &
Sebeſten, an. N°. xij.
Glycyrrhizæ raſæ & contuſæ, ℥ j.
Nucleorum Pineorum,
Piſtaciarum Mundatarum,
Seminis Bombacis,
Melonis,
Cucumeris,
Citrulli,
Florum Nymphææ, &
Violarum, an. ℥ ß.
Seminum Lactucæ,
Papaveris Albi, an. ʒ ij.

The Reſumptive Syrup, or Syrup of Tortoiſes.

℞. Of the fleſh of Wood-Tortoiſes, ℔ j.
River-Crabs, ʒ viij.
Pickt Barley,
Pulp of Dates, and the
Faireſt largeſt Raiſins of the Sun, *an.* ℥ ij.
Jujubs,
Sebeſten, *an.* N°. xij.
Liquorice ſcrap'd and bruis'd, ℥ j.
Pine-Kernels,
Piſtaches cleans'd,
Seed of the Cotton-Tree,
Melon,
Cucumber,
Citrulls,
Flowers of Water-Lilly, and
Violets, *an.* ℥ ß.
Seeds of Lettice,
White-Poppy, *an.* ʒ ij.

Take the fleſh of Wood-Tortoiſes, parted from the Bones, the Skin, and the Entrails, and the River-Crabs; put them into a glaz'd Earth'n-Pot, with two ounces of pickt Barley. Pour upon them ſix pints of Fountain-water, and having cover'd the Pot, boil the whole over a gentle fire for two hours. Then add the Fruits cleans'd and cut, and boil them with the reſt for a quarter of an hour. After which, put in the Pine-kernels, the Piſtache's, and the Seeds bruis'd, next to them the Liquorice and the flowers of *Nymphæa*, and laſtly, the Violets; and having given them ſome few Bublings, take the Pot from the fire, and when the Decoction is ſomewhat cool, ſtrain and clarifie it with the white of an Egg and three pound of Sugar. Then boil it to the conſiſtency of a Syrup. And when it is cold aromatize it with ſix drops of Oyl of Anniſeed, incorporated with an ounce of fine powder'd Sugar.

This Syrup is not ſo much in uſe; whether it is for the difficulty of getting Wood-Tortoiſes, or for the averſion that ſeveral ſick people have to thoſe ſort of Animals; or elſe for that it will not keep long: as being only to be prepar'd upon occaſion and for particular Patients.

However, the vertues of it are very conſiderable to reſtore ſtrength to Perſons waſted, and extenuated by long ſickneſs: It helps the Ptiſical, and thoſe that labour under a *Maraſmus*, for it moiſt'ns, and cools, and extinguiſhes preter-natural heat. It is to be taken between Meals in a ſpoon, from half an ounce to an ounce, continuing the uſe of it for a good while and often. It may be alſo mix'd in Juleps or Emulſions.

Syrupus Nymphææ.

℞. *Florum mediorum Albiſſimorum Nymphææ,* ℔ ij.

Syrup of Water-Lillies.

℞. The middle whiteſt flowers of Water-Lillies. ℔ ij.

Take only the white part of the Flowers of *Nymphæa*, and weigh out two pound, and having put them into an Earth'n-pot glaz'd within, with a narrow mouth, pour upon them nine pints of boiling Water; thruſt the Flowers down into the Water, and having cover'd the pot, ſet it upon hot embers for twenty four hours: then letting the infuſion buble a-while, ſtrain it out, and pour it hot upon the ſame quantity of freſh Flowers of *Nymphæa*, put into the ſame pot; and having cover'd it, repeat the ſame infuſion, boyling and ſtraining; then clarifie the Liquor with the white of an Egg, and four pound of Sugar, and boil it to the conſiſtence of a Syrup, adding at the latter end of the boyling four ounces of clarify'd Juice of Granates. This Syrup may be a little better boyl'd then ordinary to prevent the viſcoſity of the infuſion from ſpoiling the Syrup.

Syrup

Syrup of Water-Lillies cools and moiſtens very much, for which reaſon the uſe of it is very proper, as well in continu'd as intermitting Fevers. It qualifies the boiling of the choler, and appeaſes the pains that proceed from thence, particularly thoſe of the Head. It quenches thirſt and allays Venereal deſire. It provokes a ſoft ſleep, and is good againſt the heat of the Reins, and Genitals. It thick'ns the humours, and takes away their acrimony. It may be tak'n alone from half an ounce, to an ounce and a half. But uſually it is mix'd with diſtill'd waters, Emulſions, or in Decoctions, like a Julep.

Syrupus Papaveris Albi.

℞. *Capitum Papaveris Albi ad maturitatem vergentium, ſed adhuc virentium inciſorum,* ℔ *iiij.*
Capitum papaveris Nigri ejuſdem maturitatis. ℔ *ij.*

Syrup of white-Poppies.

℞. Of the heads of White-Poppies enclining to ripeneſs, but yet green, and cut, ℔ iiij.
Heads of Black-Poppies of the ſame ripeneſs, ℔ ij.

Gather the heads of both the Poppies before they be ripe. Throw away the tail, and the ſmall Crown upon the top of every head. Cut them, and put them into an Earth'n-pot glaz'd within, and pour upon them fifteen pints of boiling water, cover the pot, and ſet it upon the hot Embers for four and twenty hours, then having boyl'd them a quarter of an hour, ſtrain and preſs them out; Clarifie the Liquor with the white of an Egg, and ſix pound of fine Sugar, and boil it to the conſiſtence of a Syrup.

The uſe of Syrup of white-Poppy is very frequent, being very proper to eaſe pains and ſtay defluxions, which interrupt ſleep. It takes away the acrimony of the humours; and by inſenſible tranſpiration expels thin, ſharp, and corroding humours. It mortifies acids, ſtops the violence of Coughing, allays the motion of Flegm, and gives great help to thoſe that ſpit blood. The Doſe is from half an ounce to an ounce in proper Liquors.

This Syrup is to be in every thing preferr'd before the *Diacodium* of the Ancients.

Syrupus Papaveris Rhœados.

℞. *Florum Papaveris Rhœados recentium,* ℔ *j.*

Syrup of wild-Poppy, or Corn-Roſe.

℞. Flowers of wild-Poppy, new-gather'd, ℔ j.

Put them into a glaz'd Earth'n-pot, and pour upon them four pints of boyling fountain-water, cover the pot and ſet it for 6 hours over hot embers; then having caus'd them to boyl a little while, ſtrain and preſs them, and pour the liquor upon the ſame quantity of Poppy-Flowers put into the ſame Veſſel; let them macerate and boyl as before; then ſtrain and preſs them again, and having clarify'd the Liquor with the white of an Egg, with four pound of Sugar, boyl it up to a Syrup ſomewhat thicker then ordinary, by reaſon of the exceſs of ſuperfluous moiſture in the Flowers of red-Poppy.

The Syrup of the Flowers of red-Poppy, is commended in Diſeaſes of the Breſt, more eſpecially in Pleuriſies, chiefly where ſharp, acrimonious, and thin humours are to be ſtaid and carry'd off. It hinders the coagulation of the blood, it aſſiſts expectoration, expels choler by tranſpiration, and cauſes ſleep. The Doſe is from half an ounce to an ounce, or an ounce and a half at moſt, either alone, or in diſtill'd-Waters, Decoctions, or mix'd with other Syrups.

Syrupus de Roſis ſiccis.

℞. *Roſarum Rubrarum exungulatarum ſiccarum,* ℔ j.

Syrup of dry Roſes.

℞. Red Roſe-buds pick'd and cleans'd from their white bottoms and dry'd, ℔ j.

Put them into a glaz'd Earth'n-pot, and pour upon them ſix pints of boiling fountain-water, cover the pot, and keep it upon the hot aſhes one or two hours, and having giv'n

giv'n the infusion two or three bublings, strain and press it forth. Clarifie the Liquor with the white of an Egg, and four pound of fine Sugar, and boyl it to the consistency of a Syrup, adding toward the end one dram of Spirit of Sulphur or Vitriol.

Syrup of dry-Roses fortifies the Stomach, Liver, Spleen, and Bowels. It stays Vomiting, and all want of retention upwards or downwards. It is also very proper to stay defluxions that fall upon the Brest, to cleanse and heal little Ulcers in the Mouth and Throat, and to stop internal Bleedings. The Dose is from half an ounce to an ounce, either alone, or in Gargarisms, Juleps, or common drink.

Syrupus Florum Tunicæ sive Caryophillorum hortensium.

℞. *Florum Caryophillorum hortensium purpureorum mundatorum.* ℔ iij.

Syrup of Clove-gillow-flowers.

℞. Clove-gillow-flowers pick'd and cleans'd, ℔ iij.

Take only the red part of the body of the Clove-gillow-flower, cutting off the white bottom with a pair of Scissors; Weigh out three pound of the Flowers thus cleans'd, and having put them into a Vessel of Earth glaz'd within, with a streight mouth, pour upon them nine pints of boyling Fountain-water. Thrust down the Flowers with a Woodd'n Spatula; cover the Pot and set it upon the hot embers for six hours, at the end whereof let the infusion boyl a little, then strain and press the Flowers, and pour the hot Liquor upon the same quantity of fresh Flowers, put into the same Vessel. Macerate, boil, strain, and press them as before. Then clarifie the Liquor with the white of an Egg, with six pound of fine Sugar, and boyl it in the same Vessel over a gentle fire to the consistence of a Syrup.

Syrup of Gillow-flowers is as odoriferous as pleasing to the taste. It is very good to strength'n the Heart, Brain, and all the noble parts. For which reason it is highly commended against the Palpitations and Faintings of the Heart, weaknesses of the Stomach, Pestilential Air, Malignant Fevers, and Epidemic Diseases; as also to quick'n the Spirits, and strength'n the Memory. It may be tak'n in several Liquors, or in your usual Drink, or mix'd with Opiates, and several other Medicines. The Dose is from half an ounce to an ounce.

Syrupus Melissophylli Compositus.

℞. *Radicum Scorzoneræ,*
Dictamni Albi,
Bugloss.,
Pentaphylli, mundatarum, an. ℥ ij.
Tartari Albi pulverati, ℥ j ß.
Foliorum Melissæ recentis, *M.* iij.
Menthæ,
Scabiosæ,
Succisæ, an. *M.* j.
Seminum Citri,
Ocymi,
Oxalidis, &
Cardui Benedict. an. ʒ iij.

Compound Syrup of Balm.

℞. Roots of Vipers-grass,
White Dittany,
Bugloss,
Cinque-foil well-pickt, *an.* ℥ ij.
White Tartar pulveriz'd, ℥ j ß.
Leaves of fresh Balm, *M.* iij.
Mint,
Scabious,
Devil's bit, *an. M.* j.
Seeds of Citron,
Basil,
Sorrel, and
Carduus Benedictus, *an.* ʒ iij.

Cleanse the Roots, and having bruis'd them in a Marble-Mortar, put them together with the white-Tartar into a glaz'd Earth'n-Vessel, in eight pints of Fountain-Water, and let them boyl gently for a good half hour; then add the herbs cut, and the seeds bruis'd, and let them boyl a good quarter of an hour with the Roots. After that, strain and press out the liquor, clarifie it with the white of an Egg, with half a pint of Juice of Balm, and four pound of fine Sugar, and boyl it to a Syrup. When it is cold aromatize it with four drops of distill'd Oyl of Balm, or with Oyls of Citron, and Orange-peels, *ana Gut. ij.* incorporated with fine powder'd Sugar.

The several parts of Plants so judiciously elected that makes up the composition of this Syrup, evidently demonstrate its efficacy to strength'n the Heart, and to defend it, as well as the rest of the Noble Parts against Pestilential Air, and Diseases. It prevents

vents the putrefaction of the humours, keeps them from engendring. It cherishes the the Natural heat, creates an Appetite and helps Digestion. The dose is from half an ounce to an ounce, either alone or mixt with Potions, Opiates or other Medicines.

Syrupus de Stoechade correctus.

℞. *Florum Stoechadis Arabicæ siccorum*, ℥ iiij.
Summit. sicc. Betonicæ,
Salviæ,
Thymi,
Calaminthæ, *an.* ℥ j ß.
Florum Calendulæ,
Rorismarini,
Lavendulæ, &
Lillii convallium, *an.* ℥ j.
Seminum Rutæ,
Pæoniæ,
Dauci Cretici, *an.* ℥ ß.
Tartari albi pulverati, ℥ j.

Syrup of Cassidonie correct.

℞. Drie Flowers of *Arabian*-Cassidonie,
Drie tops of Betonie,
Sage,
Thime,
Calamint, *an.* ℥ iiij.
Flowers of Marigolds,
Rosemary,
Lavender,
Lilly of the Vallies, *an.* ℥ j ß.
Seeds of Rue,
Peonie,
Cretan Wild-carrot, *an.* ℥ j.
White Tartar pulveriz'd, ℥ ß.
℥ j.

Cut the Herbs, bruise the Seeds, beat the Tartar in a mortar; and having mix'd them with the Flowers and put them into a glass-Cucurbit, pour upon them four Pints of good *Spanish*-Wine, and as much of the distill'd-water of flowers of the Tilet-tree. Fit an Alembic to the Cucurbit, and a small Recipient to the Beak of the Alembic, all well-luted. Let the Ingredients macerate cold for four and twenty hours. Then place the Cucurbit in a Sand-Bath, and with a moderate fire draw forth by Distillation 2 Pints of Sulphurie-Aromatic-Water, and put it up in a Vessel well-stopp'd. After that, let the Vessels cool, and having unluted the Alembic, strain and press out all that remains in the Cucurbit; and having clarify'd the Liquor with the white of an Egg with four pound of fine Sugar, boyl it over a gentle-fire to the consistence of a solid Electuary: and when it is almost cold, mix and incorporate with it the two Pints of reserv'd Aromatic-distill'd-water, together with distill'd Oyls of Rosemary, Lavender, Cinnamon and Cloves, of each two drops mix'd with an ounce and a half of fine-powder'd Sugar, and put it up in a Glass-bottle well-stopp'd.

The addition of some Cephalics, and of certain distill'd Oyls instead of some Aromatics, the leaving out the drie Raisins, and the new way of Preparing this, may perhaps surprise those who had rather err with the Ancients, then either to seek for, or follow a better method.

But certainly this Method must be approv'd by those who shall take the pains to compare this Preparation with those which are to be found in several Dispensatories. For they shall find here no Ingredients but what are proper to second the intention for which they are prescrib'd, and whose vertues could not be better embody'd together then by this Preparation. I say they must acknowledg, That the most effectual vertues of the parts of Plants here prescrib'd, consisting of a volatile Sulphur, there was no better way to separate them then by Distillation, while that which is more fix'd, is incorporated in the liquor that remains at the bottom of the Cucurbit. So that by this Preparation all the pure parts of the Ingredients, as well fix'd as volatile, are united together, and embody'd in the Syrup.

Syrup of Cassidonie is very proper to fortifie the Brain, Stomach, and all the Noble parts. It is chiefly made use of in Apoplexies, Palsies, Epilepsies, and other cold Diseases of the Brain. It attenuates thick humours, cuts and loos'ns clammy and viscous flegm: op'ns obstructions, especially of the Brain: by little and little it consumes cold Rhumes; it heats and strength'ns the cold parts, and gives great ease to those that are troubl'd with the Asthma's. The dose is usually from half an ounce to an ounce, alone or mix'd with proper Liquors.

Syrupus Lientericus D. D. *D'AQUIN.*

℞. *Summitat. Abſinthii Majoris,*
Roſarum Rubrarum Exungulatar. an. M.iij.
Limaturæ Chalybis Nodulo incluſæ, ℥ *ij.*
Rhei Elect. &
Corticis Myrobalanorum Citrinorum, an. ℥*j* ß
Tartari Alb. pulverati, ℥*j.*
Santali rubri contuſi, ℥ ß.

A Syrup againſt the Lientery, by Monſieur D'AQUIN.

℞. The tops of the bigger Wormwood,
Red-roſes pickt, *an.* M.iij.
Filings of Steel ty'd up in a little cloth, ℥ ij.
Choſen Rhubarb, and
Rind of yellow-Mirobalans, *an.* ℥ j ß.
White-Tartar pulveriz'd, ℥ j.
Red Saunders bruis'd, ℥ ß.

Bruiſe the Wormwood, cut the Rhubarb, red-Saunders, and the bark of the Mirobalans, and looſely tye up the filings of ſteel. Then put the whole into an Earth'n-pot glaz'd within, with a ſtreight mouth; and having pour'd upon them three pints of the Juice of Plantain, and as much of the Juice of Roſes, cover the pot, and ſet it upon hot embers for four and twenty hours. After which, boyl the whole over a little fire, for a good quarter of an hour; then ſtrain and preſs out the Liquor, clarifie it with four pound of good Sugar, and boyl it to the conſiſtency of a Syrup.

This Syrup is very powerful to ſtay Lienteries, for which purpoſe it is particularly preſcrib'd. It ſtrengthens the Stomach, Liver, Spleen, and all the Bowels. So that it is proper againſt all defects of the retentive faculty, either upward or downward, and againſt all Diſeaſes that proceed from feebleneſs of the Bowels. It qualifies the acrimony of the humours, and ſtops internal Fluxes of Blood. The Doſe is from half an ounce to an ounce and a half, alone or mix'd in proper Liquors, and may be taken ſeveral days together if occaſion require.

Syrupus Chalybeatus Aperiens Catharticus D. D. *D'AQUIN.*

℞. *Limaturæ Chalybis in Nodulo laxo & ſuſpenſo ligatæ,* ℥ *vj.*
Radicum Fœniculi,
Cichorei, &
Rubiæ Tinctorum, an. ℥ *iij.*
Tartari Albi contuſi, ℥ *ij.*

A Chalybeat opening purging Syrup of Monſieur D'AQUIN.

℞. Filings of ſteel ty'd in a looſe hanging knot, ℥ vj.
Roots of Fennel,
Succory, and
Dyers-Madder, *an.* ℥ iij.
White Tartar bruis'd, ℥ ij.

Cleanſe and bruiſe the Roots, beat the Tartar in a Mortar, and put them together into an Earth'n-pot glaz'd within, with a ſtreight mouth, and let the ſteel hang down, ty'd in a linnen-cloth. Then pour upon them nine pints of boyling-water, wherein a good piece of red-hot ſteel had been quenched ſeven times at leaſt, and covering the pot, ſet it upon the hot embers for twelve hours; which done, let them boyl for a whole hour.

Addetisque,

Foliorum Rutæ,
Rumicis,
Lupuli,
Agrimoniæ, &
Capill. Ven. Monſpelienſis, an. M.iij.

Then add,

Leaves of Rue,
Pointed-docks,
Hops,
Agrimony, and
Maiden-hair of *Montpelier, an.* M iij.

Boil the whole again to the conſumption of the third part, ſtrain and preſs them and keep the ſtraining.

Interim,

Interim,	*In the mean while,*
℞. *Foliorum Sennæ Orientalis mundatorum,* ℥ *vi.*	Take Leaves of Eaſtern Senna well-pickt, ℥ vj.
Seminis Carthami contuſi, ℥ *iiij.*	Seed of Spaniſh Saffron bruis'd, ℥ iiij.
Tartari Vitriolati, ℥ *j.*	Tartar Vitrioliz'd, ℥ j.

Macerate them apart in another Veſſel for twelve hours, in four pints of ſteel-water, pour'd boyling hot into the Veſſel. Then give them a gentle boyling, and ſtrain and preſs out the Liquor. Clarifie this Liquor with the white of an Egg, and half a pound of Sugar, and ſet this clarify'd Liquor by it ſelf. Then clarifie the Liquor of the firſt Decoction with the white of an Egg, with ſix pound of fine Sugar, and boyl it to the conſiſtence of a ſolid Electuary. At which time, add the purgative infuſion clarify'd and boil it to a good conſiſtency of a Syrup. Which being cool may be aromatiz'd with ſix drops of Oyl of Cinamon, incorporated with an ounce of fine Sugar.

They that will be careful to prepare this Syrup, and make trial of its virtues, will acknowledge that it was not without reaſon, that his Majeſty's firſt Phyſician commanded me to inſert the Receipt into this *Pharmacopœa.*

This Syrup is very proper to open Obſtructions of the Spleen, Liver, Meſentery, and Pancreas, as alſo thoſe of the Matrix, and to looſen and carry off the viſcous and tartarous matters, that caus'd the Obſtructions. It is made uſe of with ſucceſs to cure Cachexies, Dropſies, retentions of the *Menſtruums*, and the Jaundies. The Doſe is from half an ounce to two ounces, giv'n alone, or mix'd with proper Liquors.

Syrupus Anti-Scorbuticus, D.D. D'AQUIN.		*An Anti-Scorbutic Syrup of Monſieur* D'AQUIN.	
℞. *Radicum Filicis Maris,*		℞. Roots of Male-fern,	
Angelicæ,		Angelica,	
Eringii,		Eringo's,	
Raphani Ruſticani, an.	℥ *iij.*	Horſe-radiſh, *an.*	℥ iij.
Corticum Citri,		Peels of Citron,	
Aurantiorum, an.	℥ *ij.*	Oranges, *an.*	℥ ij.
Foliorum Meliſſæ,		Leaves of Balm,	
Fumariæ,		Fumitory,	
Scolopendrii,		Spleenwort,	
Cochleariæ,		Scurvy-graſs,	
Becabungæ,		Brook-lime,	
Naſturtici Aquatici,		Water-creſſes,	
Nummulariæ,		Money-wort,	
Mentæ, an.	*M. iij.*	Mint, *an.*	*M.* iij.
Seminum Naſturtii hortenſ.		Seeds of Gard'n-Creſſes,	
Cardui Benedicti,		Carduus Benedictus,	
Citri, an.	℥ *j.*	Citron, *an.*	℥ j.
Florum Tunicæ &		Clove-gillow-flowers,	
Geniſtæ, an.	*M. j.*	Broom-flowers, *an.*	*M.* j.
Tartari Alb. contuſi,	℥ *ij.*	White-Tartar beaten,	℥ ij.

Bruiſe the Roots, and boyl them over a ſoft fire, with the Tartar powder'd, in nine pints of ſteel'd-water. Add then the Herbs cut, and the Seeds bruis'd, and let them boyl all together for half an hour, then put in the flowers, and having thruſt them down into the Decoction, take it off from the Fire, and ſtrain and preſs out the Ingredients when they are half-cold. Clarifie the Liquor with the white of an Egg, and ſix pound of fine Sugar, and boyl it up to the conſiſtence of a Syrup. When it is quite cold, aromatize it with three drops of Oyl of Cinamon, and as much Oyl of Cloves incorporated with an ounce of fine-powder'd Sugar.

The little skill which the Ancients had in Scorbutic Diſeaſes, is the reaſon that ſpecifick Remedies for thoſe Diſeaſes are ſo rare in Diſpenſatories, and that ſeveral Phyſicians find them ſo difficult to cure. For which reaſon his Majeſty's chief Phyſician thought fit to communicate to the World this Receipt, the Ingredients whereof being as exactly

chos'n as dos'd, cannot but produce good effects, as well for the eaſe as for th e cure of theſe Diſtempers, which are very frequent in the Northern Countries, eſpecially in Sea-Towns.

This Syrup effectually purifies the Maſs of the Blood, quick'ns its circulation, encreaſes the ſpirits that enliv'n it, to the want or numneſs whereof, we have good reaſon to attribute all the ſymptomes that accompany Scorbutic Diſeaſes. And becauſe theſe Diſtempers are a long time a-growing, and for that the whole Maſs of the Blood is infected, it will not be amiſs to continue the uſe of this Syrup, not only to get the upper hand of the Diſtemper, but to prevent its return. You may take one or two ſpoonfuls at a time, Evening and Morning, and alſo between Meals.

Syrupus Violatus Violaceus.

℞. *Florum Violarum recentium emundatorum,* ℔ *iiij.*

Syrup of Violets Violetted.

Take four pound of Violets deep-colour'd, newly gather'd and very clean.

Put them without bruiſing into a fine tin-veſſel large and deep enough, with a fit cover, and pour upon them three pints of boyling Fountain-water, * *Paris*-meaſure; let the flowers ſoak well in the water, and having cover'd the Veſſel, ſet it ſix hours in a warm *Balneum Mariæ*, and then ſtrain and ſqueeze the Infuſion ſtrongly, and pour it hot upon four pound of freſh Violets, put in clean into the ſame Veſſel, cover'd and kept as long in *Balneo Mariæ* as before. Strain and ſqueeze the infuſion, and you ſhall have a tincture altogether Violetted, charg'd equally both with the colour, ſmell, taſte, and virtues of the Violets. Put this tincture into a Baſon of fine Tin, large and deep, and ſet the Baſon over a moderate fire, with double the weight of fine Sugar in powder, ſtir the whole with a Woodd'n-ſpatula, till all the Sugar be diſſolv'd, and continue the Baſon upon the fire, till the Syrup has only boyl'd two or three ſimpers. Take the Baſon off the fire, and when the Syrup is quite cold, ſcum it, and put it up.

* Which make eight pints Phyſic meaſure.

For the better keeping of it, cover the top of it, with fine-powder Sugar, which with the ſuperficial moiſture of the Syrup will make a kind of a cruſt that will preſerve the Syrup two years together, provided the Pots were dry when the Syrup was put up, and that they be well-cover'd.

I confeſs that Syrup of Violets violetted, is ſo common in Shops; and ſo frequently made by the Ladies, that it might ſeem ſuperfluous to inſert it here; but not having met with any true Preparation yet, I thought fit to ſet down this Preparation, which experience will make you confeſs to be the better, and much ſuperiour to any other.

Some there are that add a ſpoonful or two of Juice of Citron, that the Violet colour of the Syrup may look a little more red. But beſide, that thoſe acids will hinder the Syrup from keeping long, that addition is altogether needleſs, in regard the colour of the Syrup will be better without it, and thoſe acids may alter the quality of the Violets.

Syrup of Violets thickens thin humours that fall from the Brain upon the Lungs, and corrects their acrimony. It cools the heat of the Liver and Stomach, as alſo of moſt Fevers, particularly choleric, adding ſome drops of ſpirit of Sulphur or Vitriol, or ſome other acid, and mingling it with Fountain, or River-water, or with ſome other proper Liquor. The pleaſant taſte of it makes it as much in uſe among thoſe who are in health as among the ſick; It is taken alone from half an ounce to an ounce, or elſe mingl'd in Juleps, Apozems, Emulſions, Looches, and many other remedies.

Formerly they made a laxative Syrup of Violets, compos'd of ſeveral infuſions of whole Violets; but the Syrup prov'd very unpleaſing, ineffectual, and more fit for Cliſters then to be ſwallow'd, and therefore not fit for this place.

Syrupus de Pomis ſimplex.

℞. *Succi Pomorum redolentium depurati,* ℔ ij.
Sacchari Albiſſimi, ℔ iiij.

Simple Syrup of Pippins.

℞. The Juice of fragrant Apples clarify'd, ℔ ij.
The whiteſt Sugar, ℔ iiij.

Having

Having preſs'd out the Juice from the Apples, ſet it in the Sun to clarifie, then pour it out by inclination and filter it. That done, put the Juice and the Sugar together over a ſmall fire, and there incorporate them to the conſiſtence of a Syrup.

The Syrup may ſerve as an Example for ſeveral ſimple Syrups whoſe foundation is the Juice of any Fruit, ſuch as are Cherries, Barberries, Red-Currans, Reſpiſs, Granates, Verjuice, *&c.*

You may alſo make the Syrup of Apples without fire, if when you have par'd the Apples you cut them into thin ſlices, throwing away the cores, and lay the thin ſlices in a new Hair-ſieve, ſet in a ſilver or white-earth'n-baſon, covering the Pippins with their thickneſs in Sugar, and continuing theſe layers of Pippins and Sugar till the Sieve be full. For then covering the ſieve with another Plate or Baſon, and leaving the whole two or three days in a cool place, you ſhall find in the lower Baſon a very pleaſant Syrup, well-colour'd and of a good conſiſtency. This Syrup thus made without fire undergoes no alteration, being endu'd with all the good qualities that can be expected.

Syrup of Pippins is accounted a very high Cordial, and very proper againſt Palpitations of the heart, eſpecially when they proceed from melancholie-vapours riſing from the Spleen. It is alſo very proper to comfort all the Noble Parts, quench thirſt, and qualifie the heat of Choleric-Fevers. It is to be tak'n by reſpites of time, either alone or mix'd with Decoctions or other proper Liquors.

Syrupus de Pomis Compoſitus.		*Syrup of Pippins compound.*	
℞. *Succi Pomorum redolentium,*	℔ *iiij.*	℞. Juice of fragrant Pippins,	℔ iiij.
Borraginis, &		Of Borrage, and	
Bugloſſi depuratorum, an.	℔ ij.	Bugloſs clarify'd, *an.*	℔ ij.
Folliculorum Sennæ Orientalis inciſorum,	℥ iiij.	Seed-bags of Senna of the Eaſt cut,	℥ iiij.
Tartari albi Monſpelienſis contuſi,	℥ ij.	White *Montpelier*-Tartar bruis'd,	℥ ij.

Bruiſe the Pippins in a Marble-mortar with a Wood'n-Peſtle, ſqueeze out the Juice, and having expos'd it for ſome days to the Sun, filter it; cut the Senna-Seed-bags, and put them into a Glaz'd-earth'n-pot with two ounces of Tartar pulveriz'd; pour upon them the purify'd Juices: cover the Pot, and ſet it upon the warm embers for 24 hours: then letting the Infuſion ſimper a while, ſtrain and preſs it out, and having clarify'd the Liquor with four pound of very white Sugar, boyl it up to a Syrup. When it is perfectly boyl'd and quite cold, mixe with it the Tincture of two drams of Saffron in powder, extracted with three ounces of Diſtill'd-oyl of Balm.

I have ſaid already, that for the more eaſie extracting the Juices of viſcous Plants, you muſt put them whole into ſome Veſſel, and having ſet them for ſome time over a moderate fire, pour out the Liquor at ſeveral times by inclination; which method muſt be us'd for extracting the Juices of Borrage and Bugloſs here mention'd; and the Juice will be clear enough: though if you would have it clearer you may expoſe it to the Sun, and filter it.

The Ancients ty'd Saffron in a little Linnen-bag, and ſoak'd it in the Syrup during the Decoction, preſſing it out from time to time, and leaving it in the Syrup when it was put up in the Pot, not conſidering that the long boyling of the Saffron, though ty'd in a Bag, could not be done without a manifeſt diſſipation of the moſt volatile parts; that by thoſe reiterated expreſſions a good part of the terreſtrial and unprofitable part of the Saffron paſs'd through the cloth, mix'd with the Syrup, and made it muddy; and that at length being left among the Syrup in the Pot, not being able to impart that vertue to it which it had loſt, it occaſion'd its putrefaction. Whereas the Tincture communicating the moſt eſſential parts of the Saffron to the Syrup, contributes to its preſervation and beauty.

Some there are that propoſe the Extract of Saffron, which is better then the Knot. But becauſe the Tincture is the baſe of the Extract, and for that the Tincture cannot be reduc'd into an Extract without ſome diſſipation of the ſubtle parts of the Saffron, there is more reaſon to make uſe of the Tincture.

The principal qualities of the compound Syrup of Pippins, are gently to purge choleric and melancholy humours: for which reaſon it is made uſe of in Diſtempers caus'd by thoſe humours, particularly in Madneſs and Hypochondriac paſſions. It is

good

good alſo in Quartan-Agues, and to purge ſharp and ſcalding humours that cauſe the Scurf and Itch, and moſt Diſeaſes of the Skin. It may be tak'n alone from one ounce to two or three. But more frequently diſſolv'd in Liquors, as the Decoctions of Apozemes, Tinctures, and Laxative Infuſions.

Syrupus Florum Perſicorum.

℞. *Florum Perſicorum recentium quantum libuerit.*

Syrup of Flowers of Peaches.

℞. Of the Flowers of Peaches as much as you pleaſe.

Bruiſe them in a Marble-mortar with a Woodd'n-peſtle, and ſqueeze out the Juice in a Preſs, and having purify'd it by ſtanding, and clarify'd it with the white of an Egg and an equal weight of Sugar, boyl it over a gentle fire to the conſiſtency of a Syrup.

The Preparation of this Syrup is not only eaſie, but keeps within it all the moſt conſiderable qualities and vertues of the Flowers; which is chiefly in their Juice.

For more exactneſs you may dry the Sediment, burn and reduce it to aſhes, and by Lixiviation, Filtration, Evaporation and Chryſtallization extract the Fix'd-ſalt that remains behind, and mixe it with the Syrup when it is boyl'd.

This Syrup is principally commended to purge the ſeroſities that trouble the Brain, Nerves and Muſcles, and which not only cauſe Rheumatiſms, but the Apoplexie, Palſie, Convulſions, and other Diſeaſes of the Brain. It alſo purges choleric humours, op'ns obſtructions, cuts the thick matters in the Meſenterie, Pancreas, Liver and Spleen. It is very proper alſo to kill Worms, and reſiſt the putrefaction of the humours. The doſe and adminiſtration is much the ſame with thoſe of Compound Syrup of Pippins.

Syrupus Roſatus Solutivus.

℞. *Succi defæcatiſſimi Roſarum pallidarum, Sacchari albiſſimi pulverati, an* ℔ *viij.*

Syrup of Roſes Solutive.

℞. Of the pureſt Juice of pale Roſes, The fineſt powder Sugar, *an.* ℔ viij.

Gather your Roſes newly blown betimes in the morning, bruiſe them in a large Marble-mortar with a Woodd'n-peſtle, and having preſs'd out the Juice, fill it into Bottles; ſtop them and expoſe them to the Sun for ſome days: and when the groſſer part of the Juice is fall'n to the bottom of the Bottles, pour the Juice into a wooll'n-Bag to ſtrain it. Then weigh out eight Pints of this clear Juice, and put it into a Glaſs-Cucurbit, with the ſame weight of fine-powder'd Sugar. And having fitted a head to the Cucurbit, and fix'd a Recipient to the beak of the Alembic, diſtil out about three pints of good ſtrong Roſe-water. Then let the Bath cool, and having unluted the Alembic, you ſhall find in the Cucurbit a fair Syrup of Roſes, fragrant, pleaſing and full of vertue. Pour it out by Inclination into a Pot, leaving at the bottom of the Cucurbit that little feces which remains.

Though that the Purgative-quality of the Roſes conſiſts chiefly in their fix'd-ſalt, and ſome ſmall portion of their leſs volatile Sulphur, which a moderate boyling cannot much diminiſh; nevertheleſs it is convenient to preſerve and ſave as much of all the good parts of the Medicament, as much as may be. And therefore you need not wonder that you meet not here with that lofty, long and troubleſome way of the Ancients, who in the compoſition of this Syrup repeat infuſion to the ninth time. Not conſiderſidering that by that great and unprofitable coſt, the Roſes loſe their moſt Spiritous and fragrant part, and that a great part of the infuſion is waſted in the Strainers, Veſſels, and other Inſtruments us'd in the preparation; and that in the end they will have a Syrup leſs pleaſant, but not ſo efficacious, as this which is here preſcrib'd; the preparation whereof ſeems to me to be moſt fit to be obſerv'd, ſince that together with ſaving a good part of the Roſe-water, you have a Syrup, wherein are all the qualities of the Roſes that can be deſir'd.

Syrup of Roſes ſolutive purges very gently all the ſeroſities contain'd in the Bowels, or diſpers'd into ſeveral parts of the body. It is very uſeful in Epidemic Diſtempers. Yet there are ſeveral Women and Virgins that cannot abide the uſe of it. The Doſe is much the ſame with that of the compound Syrup of Pippins, or Peach-flowers.

Syrupus

Syrupus Roſatus Compoſitus cum Senna & Agarico.	*Compound Syrup of Roſes with Senna and Agaric.*
℞ *Foliorum Sennæ Orientalis mundatorum,* ℥ iiij.	℞ Leaves of Oriental Senna cleans'd, ℥ iiij.
Agarici electi inciſi, ℥ ij.	The beſt Agaric cut, ℥ ij.
Tartari Albi contuſi, ℥ j.	White-Tartar powder'd, ℥ j.
Succi Roſarum Pallidarum depurati, ℔ vj.	Juice of Pale-Roſes clarify'd, ℔ vj.

Put the Senna, Agaric and Tartar into an Earth'n-glaz'd-pot. Pour upon them ſix Pints of the Juice of Pale-Roſes clarify'd, and having thruſt the Ingredients down into the Juice, cover the Pot and ſet it 24 hours upon hot embers; then letting the infuſion boyl a-while, ſtrain it and preſs it forth: and having clarify'd the Liquor with the white of an Egg and four pounds of fine Sugar, boyl it over a gentle-fire to the conſiſtence of a Syrup. When it is quite cold, aromatize it with ſix drops of Diſtill'd-oyl of Aniſe, and two drops of Oyl of Cloves, incorporated with an ounce and a half of fine powder'd Sugar.

This Syrup purges much more then ordinary Syrup of Roſes; it purges Choler, Flegm and Melancholy. It kills and expels Worms. It op'ns the Paſſages; it cuts, attenuates, and loos'ns tough and viſcous humours; and draws flegm from the remote parts. The doſe is from one ounce to two. It is to be adminiſtr'd like other Purgative Syrups.

According to this method you may prepare a Compound Syrup of Roſes with Senna and Rhubarb without Agaric, not ſo proper to purge flegm, and draw it from the remote parts, but to purge gently choleric humours and ſtrength'n the parts. But in regard this Syrup is not much in uſe, you may ſupply its defect by adding to Syrup of Roſes ſolutive an Infuſion of Senna and Rhubarb, when occaſion requires. The proportion of Senna and Rhubarb muſt be equal to that of the Senna and Agaric preſcrib'd above.

Syrupus Emeticus.	*An Emetic Syrup.*
℞ *Vitri Antimonii abſq; additione parati, & Nitro correcti,* ℥ iij.	℞ Glaſs of Antimony prepar'd without addition, and corrected with Nitre, ℥ iij.
Succi Cydoniorum puriſſimi, ℔ vj.	Of the pureſt Juice of Quinces, ℔ vj.

Powder the Glaſs of Antimony very ſmall. Put it into a Glaſs-Cucurbit; and havin pour'd upon it ſix Pints of Juice of Quinces very well clarify'd, cover the Cucurbit, and let them macerate for 24 hours in a Bath of aſhes moderately hot; filter the liquor through a ſheet of brown Paper, and return it into the ſame Cucurbit, with two pound of fine Sugar; then boil it in the Ember-bath hotter then ordinary, to the conſiſtence of Syrup. When it is quite cold, aromatize it with two drops of Oyl of Cinamon incorporated with half an ounce of fine-powder'd Sugar, and keep the Syrup in a Bottle cloſe-ſtopp'd.

Though the Antimony be the foundation of this Syrup, and that Vitrification and Correction be Chymical Operations, and beyond the verge of *Galenic Pharmacy*; nevertheleſs it is here very properly made uſe of, and this *Emetic* Syrup with as much reaſon here inſerted. Nor is it to be wonder'd that ſix Pints of the Juice of Quinces ſhould be preſcrib'd to extract the vertue of three ounces of prepar'd Antimony, or that the Proportions of Liquors us'd in Infuſions or Decoctions according to the Rules of ordinary Pharmacy are not here obſerv'd: For the Antimony thus prepar'd being in a condition to act in a very ſmall doſe, is as able ſufficiently to impart its vertue to a good quantity of Liquor, which Liquor being afterwards united with the Sugar, and there concenter'd by boyling, renders the *Emetic* Syrup no leſs pleaſing, then powerful to operate in a much leſs doſe then *Emetic* Wine, or any other Liquors, wherein uſually ſeveral Preparations of Antimony are infus'd, but not concenter'd.

This Syrup is call'd *Emetic*, becauſe of its effects, which are chiefly to excite vomiting, to empty the Stomach of ill-humours which are ſometimes too obſtinately fix'd. And it is obſervable that Syrup after it has provok'd vomiting, many times procures ſome ſtools, proceeding either from the Excrements of the Stomach or Bowels. It happ'ns alſo ſometimes that ſome Perſons never vomit, but that this Syrup works altogether

gether downward, which is ſo much the leſs trouble. There is no Preparation of Antimony that works with more gentleneſs or leſs trouble then this Syrup: It may be giv'n to all Ages and Sexes, ſucking Children and old Men, in diſtempers caus'd by plenitude, particularly when there is a collection of bad humours in the Stomach. The doſe is from two drams to an ounce, or at moſt to an ounce and a half for very ſtrong Bodies. It is giv'n alone, or mix'd in white Wine, Broth, or any other proper Liquor. It is alſo mix'd with Purgatives diminiſhing the doſe, and proportionating it to that of other Remedies.

Syrupus de Rhamno Cathartico.	*Syrup of Purging-Thorn.*
℞. *Baccarum Fruticis illius qui nomen fert Spinæ Cervinæ, aut Infectoriæ, ſeu Rhamni Cathartici, quantum libuerit.*	℞. Of the Berries of the Shrub call'd Hart's-Thorn, Stayning-thorn, or Purging-Thorn, as much as you think fit.

Put them to macerate into a Glaz'd-earth'n-veſſel over hot embers for two or three hours, ſtirring them every-foot with a woodd'n-peſtle. Then, having preſs'd them out, take ſix Pints of their pure Juice, and four pound of Sugar, and boyl them together over a ſoft fire to the conſiſtency of a Syrup. Take it off the fire, ſcum it and let it cool, and aromatize it with four drops of diſtill'd-Oyl of Cinamon, and as much Cloves incorporated with an ounce and a half of fine Sugar in powder, and put up the Syrup well-ſtopp'd.

The Purging-Thorn is a low ſhrub, the trunk whereof is about as big as a Man's-leg; from whence grow ſeveral thornie-branches, with leaves like thoſe of the Crab-tree. The Berries are as big as Juniper-berries well-grown; green at firſt, afterwards when they are ripe, black and ſhining. Theſe Berries grow in cluſters, having five or ſix Seeds within, long and triangular, the Juice whereof is ſomewhat dark greeniſh and bitter.

This Syrup powerfully carries off the ſeroſities of all the habit of the Body. It is us'd in Cachexies, and in diſeaſes of the Joynts, but particularly for the cure of watry Dropſies and Rheumatiſms. The uſual doſe is from half an ounce to an ounce. It is tak'n alone or mix'd in Decoctions, or other proper Liquors.

I could here add ſeveral other Preparations of ſeveral other Syrups; but I am perſuaded that the Preparations and Rules already ſet down will afford inſtruction ſufficient to any *Apothecary* to prepare the reſt which are here omitted.

CHAP. XVI.

Of Honeys.

I Thought fit to treat of Honeys immediately after Syrups, becauſe that their Preparation and their conſiſtency are not much unlike the one to the other. The extraordinary ſweetneſs, the pleaſing taſte of Sugar, the plenty of it and its aptneſs to ſuck up forreign moiſture, are the reaſons that Honey is now-a-days leſs in requeſt then formerly. For though that Honey may be ſaid to be a collection and an extraction of the moſt pure parts of Flowers, Fruits, and other parts of Plants, and that the Dew and Influence of the Stars may very much contribute to its compoſition, and that there may be reaſon enough to prefer it before Sugar, which is the Juice of only one ſingle Plant: nevertheleſs it is now-a-days leſs us'd then Sugar. So that we prepare for the Shops not above five or ſix ſorts of Honeys, the moſt part whereof are appointed for Clyſters: Two ſorts of Oxymels, and one Hydromel.

'Tis true that good Honey is oft'n made uſe of, and preſerv'd likewiſe before Sugar in the Compoſitions of ſeveral Medicaments, and particularly of certain Opiats, which are to keep long, as Treacle and Mithridate; becauſe the parts of Honey are more united and more viſcous then thoſe of Sugar, and becauſe it is more fit to bind the Ingredients with which it is mix'd, and to reſiſt putrefaction longer then Sugar.

Mel

Mel Roſatum.

℞. *Succi Roſarum Rubrarum,*
Mellis optimi, an. *partes æquales.*

Honey of Roſes.

℞. Of the Juice of Red Roſes,
The beſt Honey, *an.* equal parts.

Bruiſe the Freſh red-Roſes in a Marble-mortar, ſqueeze out the Juice and expoſe it to the Sun in Bottles for ſome days to purifie, then paſs it through a Wooll'n-bag, and having mix'd it with equal parts of pure Honey, clarifie both together with the white of an Egg: ſcum it when it is cold and put it up.

Red-Roſes are of an earthy and compact ſubſtance, ſo that they will endure a longer and fiercer boyling then other Roſes, without endangering the diſſipation of their good parts.

You may inſtead of the Juice make uſe of the Infuſion of Red-Roſes, two or three times repeated, and prepare it like the Infuſion of the Flowers of Nymphæa for the Syrup. You may alſo uſe Honey of Roſes laxative with the Juice of Pale Roſes, obſerving the ſame method ſet down for Syrup of Roſes ſolutive.

The Honey of Roſes firſt mention'd, cleanſes, cloſes and fortifies: therefore it is us'd for all diſeaſes of the mouth, tak'n alone or in Gargariſms. It is alſo mix'd in Lotions and Vulnerarie Injections. It ſerves alſo in Opiates to cleanſe and whit'n the Teeth; and is frequently us'd in aſtringent and cleanſing Clyſters. The proportion of Honey of Roſes in Lotions, Injections, Gargariſms or Clyſters, is two or three ounces to a * *Chopine* of liquor, *Paris*-meaſure.

* *Near as big as our whole Pint.*

Mel Anthoſatum.

℞. *Florum Recentium mundatorum,* ℔ *ij.*

Honey of Roſemary-flowers.

℞. New Flowers of Roſemary clean-pickt, ℔ ij.

Bruiſe the Flowers well-pickt and cleans'd in a Mortar with a woodd'n Peſtle, and paſs them through a Hair-ſieve; then incorporate them with treble their weight of good Honey hot and ſcumm'd, without the addition of any other Liquor. When it is cold put it up.

The Flowers of Roſemary are of a Subſtance very thin and full of moiſture, ſo that if they ſhould be boyl'd in Water or in the Honey, their better part would be loſt: and if the Honey ſhould be charg'd with any extraneous moiſture, by increaſing the moiſture of the Flowers, it would occaſion putrefaction.

Anthoſate-Honey thus prepar'd enjoyes all the vertues of the Roſemary-flowers, and is of a due conſiſtence, and may be as well ſwallow'd as diſſolv'd in Clyſters.

You may prepare a Honey with a Decoction of Roſemary-leaves, and uſe it in Clyſters inſtead of Anthoſate-Honey: But it is better to mixe the Leaves of Roſemary in the Decoction of Clyſters, then to peſter a Shop with a Honey ſo little us'd; beſides, the apprehended danger which the heat of the pure Decoction of Roſemary-leaves may cauſe to the Bowels.

Honey of Roſemary-flowers prepar'd as above, may ſerve inſtead of conſerve of *Anthos* or Roſemary-flowers prepar'd with Sugar. It may be ſwallow'd in all cold Diſeaſes of the Brain: It ſtrength'ns the memory, and diſperſes the Vapours that cauſe Vertigo's. It is alſo us'd in cold diſeaſes of the Stomach and Inteſtines; particularly in windy Colicks and fits of the Mother, ſwallow'd or tak'n in Clyſters.

Mel Mercuriale.

℞. *Succi Mercurialis quiete defæcati,*
&
Mellis optimi, an. *partes æquales.*

Honey of Herb-Mercury.

℞. Of the Juice of Mercury ſoftly purify'd,
and
The beſt Honey, *an.* equal parts.

Clarifie them with the whites of Eggs according to Art, and boyl them to the consistence of a Syrup somewhat thicker then ordinary.

There are some that instead of drawing forth, and depurating the Juice of Mercury, only make a kind of Decoction; and they boyl the Honey as if they made use of the Juice, but they use a greater quantity of the Decoction.

Honey of Mercury mix'd with Clysters mollifies and soaks tough matters, that settle in the Bowels. It loosens the Belly, and provokes the *Menstruums*. It is very much us'd in Hysteric Distempers, and in all sorts of Colicks. The Dose is from one ounce to three, in proper Liquors or Decoctions.

Mel Violatum.		*Honey of Violets.*	
℞. *Violarum recentium,*	℔ *iiij.*	Take fresh Violets,	℔ iiij.

Boyl them for a good hour in twelve pints of fair-water; strain the Decoction, squeezing the Violets. Then in the strain'd Liquor boyl four pound of new Violets, proceeding as before. Boyl yet four pound more of fresh Violets in the Liquor, and having strain'd and pres's'd the Decoction, and mix'd the Liquor with twelve plnts of good Honey, clarifie it with the whites of Eggs; boyl it to the consistence of a Syrup somewhat thicker then ordinary, scum it, and put it up.

The volatile part of the Violets, which is subject to dissipation, is very useless in Honey of Violets, which is only for Clysters, whose principal vertue is to moisten, and render the Bowels slippery. The Dose and use of Honey of Violets, are the same with those of Honey of Mercury.

Mel Vulvariæ.		*Honey of stinking Arrache.*	
℞. *Foliorum Vulvariæ,*	*Fasc. ij.*	Take of the Leaves of stinking Arrache, two little bundles.	

Cut them and boyl them in sixteen pints of Fountain-water, to the consumption of the third part, and having strain'd and well pres's'd the boyl'd Herbs, boyl the same quantity of fresh Arrach in the Liquor, proceeding as before; then having mingl'd sixteen pints of the best Honey with the Liquor, clarifie it with two whites of Eggs, and boyl it to a just consistence. Scum the Honey and put it up.

Though Honey of Arrach be not so much in use, it deserves to be plac'd among the Honey's. For it is very effectual in Hysteric-distempers; above all to appease the violent commotions of the *Matrix*. It is also very useful in windy Colicks. The dose in Clysters is from two ounces to three.

Mel Nympharinum.		*Honey of Water-Lillies.*	
℞. *Florum Nymphæa, rejectâ parte interiore luteâ,*	℔ viij.	℞. Of the Flowers of Water-Lillies, leaving out the yellow inside,	℔ viij.
Aquæ Fontanæ,	℔ *xvj.*	Fair Water,	℔ xvj.

Boyl them over a gentle-fire to the consumption of the third part. Strain and pres's out the the Liquor: boyl the same quantity of fresh Flowers again in the Water. Strain and pres's out the Liquor, and having mix'd with it sixteen pints of the best Honey, clarifie it with whites of Eggs, and boyl it to a just consistency.

Honey of Water-Lillies is onely made use of in Clysters: It moist'ns, mollifies and cools the Bowels exceedingly. The dose is the same with that of Honey of Violets.

Oxymel Simplex.		*Simple Oxymel.*	
℞. *Mellis optimi,*	℔ *iiij.*	℞. Of the best Honey,	℔ iiij.

Put

Put it into a glaz'd-Earth'n-pot, let it boil ſome few bublings over a gentle charcoal-fire; when it is a little cool ſcum it.

Addetiſque,		*Then add,*	
Aceti Albi Optimi	℔ *ij.*	Of the beſt White-wine Vinegar,	℔ ij.

Boyl both together to the juſt conſiſtency of a Syrup.

It is not neceſſary to boyl Water with the Honey, as ſome pretend to raiſe the ſcum, for it may be ſcumm'd without any addition. Nor is the Water e're a jot more neceſſary to qualifie the ſharpneſs of the Vinegar, in regard that ſharpneſs is not only the thing we deſire, to maintain the effects expected from the *Oxymel*; but always remains laſt in the Decoction of the Vinegar. Beſides, we muſt believe, that the Water which they would add, can be but a trouble, and that in the conſumption which is to be made of it, it would but help forward the diſſipation of ſome volatile part of the Honey.

This *Oxymel* is good to looſen tough and viſcous flegm, as well in the Mouth and Throat, as in the Stomach and other parts of the body, where it may ſtick. It may be taken in a ſpoon a little at a time. But it is better in Liquors to make Gargariſms, adding more or leſs of the Liquors, as you deſire the operation ſtronger or weaker; For the Liquors abate its activity. It is alſo mix'd with Looches and Syrups to abate its activity, and to aſſiſt them to cut and looſen flegm from the Lungs and Stomach. The Proportion of this *Oxymel* in Liquors, is from an ounce and a half to two ounces, in a pint of a deterſive decoction, or in ſome proper diſtill'd-water.

Oxymel Scilliticum.		*Oxymel of Squills.*	
℞. *Mellis Optimi*,	℔ *iiij.*	℞. Of the beſt Honey,	℔ iiij.
Aceti Scillitici,	℔ *ij.*	Vinegar of Squills,	℔ ij.

Let them boyl gently, and ſcum them, then boyl them over a very gentle fire to a juſt conſiſtence.

The Preparation of Vinegar of Squills is already ſet down in the Chapter of Vinegars.

You may gueſs at the vertues of the *Oxymel*, by what I have ſpoken concerning the qualities of the Vinegar.

Hydromel Vinoſum.		*A Winy Hydromel.*	
℞. *Mellis Albi Optimi*,	℔ *iiij.*	Take of the beſt white-Honey,	℔ iiij.
Aquæ pluvialis circa veris Æquinoctium collectæ,	℔ *xx.*	Rain-Water ſav'd at the time of the vernal Æquinox,	℔ xx.

Boil them gently together in a Copper-Veſſel tinn'd within, ſtirring them from time to time, till the third part of the moiſture be conſum'd, or rather, till an Egg being caſt into the *Hydromel* will not ſink but ſwim at top. The *Hydromel* being thus boyl'd and ſettl'd, pour out all the clear Liquor into a ſmall Cask, and put it in the Sun, or elſe in ſome hot place, for forty days, or elſe till the Fermentation be over. Fill up the waſte of the Fermentation, or what the Cask wants of being full, with other *Hydromel*, or good *Spaniſh*-wine; and having ſtopp'd up the Veſſel, ſet it in a Cellar, or ſome very cool place.

By this means, the *Hydromel* will have a taſte like that of Malmſey, which having left its earthy parts and being exalted by Fermentation, will yield an inflammable ſpirit, like to that of Wine.

Sometimes we make compound drinks of Pectoral decoctions, ſweeten'd with Honey, ſcum'd, clarify'd, and boyl'd to a thinner conſiſtency then the preceding *Hydromel*, and which bear the name of *Hydromel*, becauſe Water and Honey are their foundation; but theſe *Hydromels* are ſeldom prepar'd but for preſent uſe.

Winy *Hydromel* is a Medicinal nouriſhment, as pleaſing as profitable. It comforts and ſtrengthens the Noble Parts, and affords good nouriſhment, being made uſe of by the healthy as well as by the ſick.

CHAP. XVII.

Of Looches.

LOoches are Internal compoſitions, of a conſiſtency between Syrups and ſoft Electuaries, and chiefly appointed for Diſeaſes of the Lungs. The Greeks call them Ἐκλείγματα, and the Latines *Linctus*, or *Lambatives*. The Name of Looch, though *Arabian*, has been always moſt in uſe. They are made thicker then Syrups, to the end that ſtaying in the Throat, their vertue may have time to penetrate into the Breſt, through the rough Artery, and to be imparted to the parts that want it, there to concoct and digeſt the flegm, and fit it for expectoration, to ſtop and thick'n the Rheum when it is too thin, and to cut and attenuate flegm that is tough and obſtinate. Nevertheleſs though they are much in uſe, they are ſeldom prepar'd, but when preſcrib'd, in regard the Medicaments that compoſe them are ready at all times, and for that their mixture is not difficult. However, I will produce two Receipts, the compoſition whereof may be kept for ſome time, if you pleaſe, or be prepar'd upon occaſion.

Looch Sanum Reformatum.		*A ſound reformed Looch.*	
℞. *Hordei Mundati,*	℥j.	℞. Pickt Barley,	℥j.
Radicum Petaſitidis,&		Roots of Butter-bur,	
Enulæ Campanæ, an.	℥ß.	Elecampane, *an.*	℥ß.
Paſſulas Damaſcenas Mundatas,		Large Ston'd Raiſins,	
Ficus recentes ſiccas,		New dry Figgs,	
Dactylos pingues Enucleatos,		Fat Dates ſton'd,	
Jujubas,		Jujubs,	
Sebeſten, ana.	N°. *xij.*	Sebeſtens, *an.*	N°. xij.
Foliorum Hyſſopi,		Leaves of Hyſop,	
Calaminthæ,		Calaminth,	
Capil. Ven. Monſpelienſis,		*Venus*-hair of *Montpelier,*	
Adianti Vulgaris, an.	*M.j.*	Common Maiden-hair, *an.*	M.j.
Seminum Malvæ		Seeds of Mallows,	
Althææ,		Marſh-mallows,	
Bombacis,&		Cotton, and	
Papaveris albi, an.	℥ *ij.*	White-Poppy, *an.*	℥ ij.

Boyl the pickt-Barley in a glaz'd-Earth'n-pot, over a ſoft fire, in ſix pints of Fountain-water, for half an hour; then add the Roots cleans'd and bruis'd, let them boyl with the Barley a good quarter of an hour; after that, put in the Fruits cleans'd and ſlic'd, which muſt boyl a little while with the reſt; which done, put in the Hyſop, Calamint, and cold ſeeds bruis'd. After they have boyl'd a little while, take off the Decoction from the fire, and when it is half-cold, ſtrain it and preſs it lightly; and having clarify'd it with the white of an Egg, with two pound of fine Sugar, boyl it to the conſiſtency of a Syrup, a little thicker then ordinary. The Syrup being half cold,

Permiſceantur,		*Add thereto,*	
Pinearum, &		Kernels of Pine-Apples, and	
Amygdalarum dulcium emundatarum		Sweet Almonds cleans'd, beaten to	
contuſarum & per cribrum trajectarum, an.	℥ *vi.*	powder, and ſifted, *an.*	℥ vj.
Glycyrrhizæ mundatæ,		Liquorice cleans'd,	
Gummi Tragacanthi, &		Gum-Tragacanth,	

Arabici

Arabici, & *Radicis Ireos ſubtiliter pulveratorum, an.* ℥ iij.	Arabic, and Root of Orrice beaten into fine powder, *an.* ℥ iij.

Incorporate them with the Syrup, and when all the Ingredients are cold, aromatize it with Oyls of Anniſe, and Fennel, of each three drops, mix'd with an ounce of fine powder-Sugar; then put up the Looch in a Gally-pot well-ſtopp'd.

The pickt Barley being put into the Decoction, is the reaſon why fine-Sugar is preſcrib'd inſtead of Pennets, uſually preſcrib'd in the common Receipts of this Looch, whoſe Foundation is the Decoction of Barley. The Roots of Butter-bur, and Elecampane augment the cutting quality of the other Ingredients, and facilitate expectoration. The Seeds of Mallows, Marſh-mallows, Cotton, and white-Poppy, ſerve to thick'n and ſtop thin defluxions from the Head upon the Breſt, and producing the ſame effects, as the ſeeds of Fennel and Line, preſcrib'd in other Receipts, do not give the Looch that unpleaſing taſte or ſmell as they do. You may leave the Liquorice out of the Decoction, in regard it is mixt in Powder to a ſufficient quantity in the Looch. Laſtly, the diſtill'd Oyls of Anniſe and Fennel are better then the Seeds boyl'd in the Decoction, that deſtroys their Volatile and Sulphury part, which is the principal.

This Looch cannot but be of great virtue to thick'n and ſtop thin defluxions from the Head upon the Lungs, as alſo to cut and looſen thoſe that are already got into the Muſcles of the Larynx, to cleanſe and mollifie the parts that ſerve for Reſpiration.

It may be taken in the Day and Night-time, every foot, about the bigneſs of a little Nut at once, with a little ſtick of Liquorice ſcrap'd and bruis'd at the end. Theſe Medicines muſt be kept a long time in the Mouth, and ſwallow'd ſlowly.

Looch Pectorale.		*A pectoral Looch.*	
℞ *Mucilaginis Gummi Tragacanthi in Aqua Roſarum extracta,*		℞. Mucilage of Gum-Tragacanth, extracted in Roſe-water,	
Sacchari Candi, &		Sugar-Candy, and	
Penidiati, pulveratorum, an.	℥ ij.	Penedite, pouder'd, *an.*	℥ ij.
Liquoritiæ,	℥ ß.	Liquorice,	℥ ß.
Ireos Florentiæ,	℥ ij.	*Florence*-Orrice,	℥ ij.
Radicis Enulæ Campanæ,	℥ j.	Root of Elecampane,	℥ j.

Put a dram of Tragacanth powder'd into a diſh with 2 or 3 ounces of good Roſe-water, ſet it over hot embers, ſtirring them from time to time with a Woodd'n-Spatula, till the Gum-Tragacanth be well diſſolv'd, and reduc'd into a white-Paſt. Powder the Sugar-candy; and Penidiate in a Marble-mortar with a Woodd'n-Peſtle; and adding to them the Mucilage, the powders of Liquorice, Orrice, and Elecampane, unite them together with equal parts of Magiſterial Pectoral Syrup, and Syrup of white-Poppies, and reduce them to a conſiſtency between a Syrup and a ſoft Electuary, which you may, if the Phyſician thinks fit, aromatize with diſtill'd Oyls of Anniſe, and Fennel, *an.* two drops, incorporated with half an ounce of fine powder'd Sugar.

The Vertues of this Looch come very near to thoſe of the ſound Looch. Nevertheleſs, you may change, increaſe or abate any of the Medicines, according to the condition of the Diſeaſe, and the Patient who is to make uſe of the remedy.

There is a preparation of Caſſia with Sugar, to which the Ancients have given the name of a Looch, but it is rather to be put among the ſoft Electuaries, then among the Looches.

John Howells
Liber

CHAP.

CHAP. XVIII.

Of Tablets, or Solid Electuaries.

THE uſe of Tablets ſo nearly reſembles that of Looches, that they may well be rank'd in the next place; and ſo much the rather, becauſe that Tablets are frequently prepar'd for diſeaſes of the Breſt, and are more frequently us'd then Looches. Tablets are ſometimes more, ſometimes leſs compounded, and their compoſition is different, according to the purpoſe for which they are compounded. Sugar is the ingredient moſt plentifully us'd in their compoſition; as well to pleaſe the taſte of the Patient, as to bind and incorporate the other Drugs, which could not be redue'd into a Solid form by the Sugar, did it not exceed them in quantity: unleſs you make uſe of the mucilages of Gum-Tragacanth; for they are able to bind ſeveral Medicaments without any mixture of Sugar. Tablets are made of a ſolid conſiſtence, that they may be the more eaſily carry'd about in the Pocket, and that they may be held a long time in the Mouth, and that they may not be ſo ſoon diſſolv'd as Syrups or Looches.

For the Preparation of Tablets, we uſe to diſſolve Sugar in ſome Liquor, to clarifie or ſcum it if there be occaſion, to boyl it to the conſiſtence of a ſolid Electuary, and to mixe with it while it is hot, ſometimes Powders, ſometimes Conſerves, Conditements, Confections, Fruits beat'n in a mortar, diſtill'd Oyls, and ſometimes Salts and Spirits, The proportion of the Powders to the Sugar cannot be well-limited, becauſe of the various nature of the Powders, and the various purpoſes for which the Tablets are made. We uſe to put three ounces of Powder to one pound of Sugar, for ſolid Purgative-Electuaries. We alſo put ſometimes the ſame quantity of Powder to every pound of Sugar for Pectoral Lozenges. But moſt frequently an ounce, or an ounce and a half ſerves turn, eſpecially if the Medicament be of a ſtrong ſcent or taſte, or that operates in a ſmall quantity. An ounce or an ounce and a half of Powder ſerves turn to a pound of Sugar for Cordial Lozenges; and almoſt the ſame proportion holds for Stomachical, Aperitive, Hepatic-Tablets.

But there muſt be great care tak'n in reference to Pulps, and other ſoft or liquid Subſtances, which are to compound Lozenges, which are uſually mix'd when the Sugar is boyl'd. For beſides that they may occaſion ſome augmentation of the quantity of the Powders, you may either boyl the Sugar the more before the mixture, or ſlack'n boyling upon the fire after the Ingredients are mix'd, to conſume the ſuperfluous moiſture that may be therein. In all which things the Artiſt muſt be guided more by his judgment then by any Rules that can be preſcrib'd.

Saccharum Roſatum.		*Sugar of Roſes.*	
℞. *Sacchari albiſſimi contuſi,*	℔ *j.*	℞. Fine white Sugar groſly-beat'n,	℔ j.
Aquæ Roſarum fragrantiſſimæ,	℥ *iiij.*	The moſt fragrant Roſe-water,	℥ iiij.

Pour the Roſe-water upon the Sugar, and boyl them in a Poſnet over a ſoft fire to the conſiſtence of an Electuary. Take the Skillet from the fire, ſtir the Sugar with a Spatula, and when it begins to coagulate, pour it out upon a ſheet of white Paper, or upon a Tin-diſh to make Tablets. You may alſo mixe with the ſame boyl'd Sugar an ounce and a half of red Roſes pulveriz'd, ſprinkl'd with ſome few drops of Spirit of Sulphur or Brimſtone. And theſe Tablets are call'd Conſerve of drie Roſes, or the Rock-Conſerve.

Sugar of white Roſes is deterſive with a little aſtriction. It is very much us'd in all diſeaſes of the Breſt, as well for its pleaſant taſte, and eaſe which it gives: You may take it day and night at all hours. Sugar of Roſes is alſo mix'd in Powder with Aſſes, Goats or Cows-Milk, and tak'n in a morning faſting. The doſe is from two drams to an ounce, according to the quantity of Milk and the Palate of the Patient.

Tablets of red Roſes are more binding. It is good to ſtrength'n the Ventricle and the Liver, and to ſtop thin Rhumes that fall from the Head upon the Lungs. They are tak'n after the ſame manner as ordinary Sugar of Roſes.

Tabellæ

Tabellæ de Althea Simplices & Compositæ.

℞. *Pulpæ Radicum Althææ per ſetaceum trajectæ,* ℥iiij.
Sacchari ſolidi, ℔ j ß.
Aquæ Roſarum, ℥vj.
Fiant ex Arte Tabellæ.

Simple and Compound Lozenges of Marſh-mallows.

℞. Of the Pulp of the Roots of Althea paſs'd through a Hair-ſieve, ℥ iiij.
Loaf-Sugar, ℔ j ß.
Roſe-water, ℥ vj.
Make Lozenges according to Art.

Chooſe out large well-grown Roots of Marſh-mallows, waſh them and take off the rind, and having cut them into thin round ſlices, boyl them over a ſoft fire with Fountain-water in an Earth'n-glaz'd-pot, till they be very tender. Then bruiſe them in a Marble-mortar with a woodd'n-peſtle, and paſs four ounces of the pulp through the wrong ſide of a Hair-ſieve. Put a pound and a half of fine Sugar with ſix ounces of Roſe-water into a Skillet, and boyl them to the conſiſtence of a ſolid Electuary, wherein you muſt diſſolve the pulp; then ſetting the Skillet over the fire for a very ſmall time to evaporate the ſuperfluous moiſture, make your Lozenges.

Quod ſi compoſitas volueris,

℞. *Pulpæ prædictæ,* ℥ij.
Seminis Papaveris alb. contuſi,
Pulveris Ireos Florentiæ,
Diatragacanthi frigidi, &
Glycyrrhizæ, an. ℥iij.
Sacchari albiſſimi in Aqua Roſarum ſoluti, & in Electuarium ſolidum cocti, ℔ j.

If you deſire them compounded,

℞. Of the fore-ſaid Pulp, ℥ ij.
Seed of white Poppy beat'n,
Powder of *Florence*-Orrice,
Cold Diatragacanth, and
Liquorice, *an.* ℥ iij.
Whiteſt Sugar diſſolv'd in Roſe-water, and boil'd to the conſiſtence of a ſolid Electuary, ℔ j.

Boyl the Sugar and the Roſe-water to the conſiſtence of a ſolid Electuary: take the Skillet from the fire, and firſt mixe the Pulp preſcrib'd, after that the Powders; and make your Lozenges of what form or bigneſs you pleaſe.

You may mixe with the Powders a dram of Magiſterie of Sulphur. You may alſo in the ſame manner make ſeveral other Pectoral-Lozenges.

Talbets of Althea are us'd to remedie old and new Coughs, and in all diſeaſes of the Breſt; eſpecially to carry off the acrimony of the humours, and to ſtay Defluxions. They are to be tak'n at all times, like Tablets of Sugar of Roſes.

Succus Liquoritiæ Niger.

℞. *Extracti Liquoritiæ conſiſtentiæ molliores,*
Sacchari opt. pulverati, an. ℔ *ij.*
Gummi Arabici ſoluti & colati ℥ j.
Mucilaginis ſpiſſioris Gummi Tragacanthi in Aqua Roſarum extractæ, ℥ *j* ß.

Black Juice of Liquorice.

℞. Extract of Liquorice of a ſofter conſiſtencie,
Fine-powder'd Sugar, *an.* ℔ ij.
Gum-*Arabick* diſſolv'd and ſtrain'd, ℥ j.
Thicker Muſcilage of Gum-Tragacanth, extracted with Roſe-water, ℥ j ß.

Beat them and incorporate them well together in a Marble-mortar with a woodd'n-peſtle, and make them into Rolls, Tablets or Lozenges as you pleaſe.

The Gum-*Arabick* muſt be paſs'd through a Hair-ſieve, being firſt powder'd and diſſolv'd in Roſe-water.

I have plac'd this Compoſition among the Tablets, as well for its Conſiſtency, as for the Form of making it up.

There are ſeveral Preparations of the Black Juice of Liquorice, as well in *Spain* as in ſeveral Towns in *France*; and the quick vent there is for it, cauſes the Women to deal in it. But I take the Receipt which I have ſet down to be ſuperiour to theirs, in regard it contains all the vertue and good taſte that can be expected.

The uſe of it is too familiar to want directions.

Succus Liquoritiæ Albus.

℞. *Pulveris Liquoritiæ mundatæ,*
Radicis Ireos Florentiæ, ℥ *vj.*
Amyli, ℥ *ij.*
Sacchari opt. ſubtiliter pulverati, ℔ *j.*
Moſchi Orientalis,
Ambrægriſeæ, an. *Gr. iij.*

White Juice of Liquorice.

℞. Clean-powder of Liquorice,
Roots of *Florence*-Orrice, *an.* ℥vj,
Flower of Wheat pounded, ℥ij.
The beſt Sugar finely-powder'd, ℔j.
Oriental Musk,
Ambergriſe, *an.* *Gr.* iij.

Incorporate all theſe together with a muſcilage of Gum-Tragacanth extracted in Roſe-water, mixing and beating them together in a Marble-mortar with a woodd'n-peſtle into a ſolid paſte. Make them up into Rolls or Tablets, and drie them by the fire upon a white ſheet of Paper.

This Compoſition is improperly call'd by the Name of Juice of Liquorice; ſince there is nothing but the Powder of Liquorice in it. But in regard that cuſtom has prevail'd to continue the Name, we thought it convenient to place it here.

This Juice of White Liquorice is more pleaſing then the Black,but much inferior to it in vertue. Yet it is as much or more in requeſt, becauſe of its acceptable taſte and ſmell.

Manus Chriſti Perlata.

℞. *Succhari albiſſimi in fruſta diſſecti,* ℔ *j.*
Aquæ Roſarum fragrantiſſimæ, ℥ *iiij.*

Manus-Chriſti *Pearl'd.*

℞. Fineſt white Sugar brok'n into pieces, ℔j.
Fragrant Roſe-water, ℥iiij.

Boyl them together over a moderate fire to the conſiſtence of a ſolid Electuary, and when they are half-cold, incorporate with them half an ounce of Oriental-Pearl, and make up your Tablets according to Art.

Theſe Tablets are call'd by the Name of *Manus-Chriſti* or Sugar of Roſes Pearl'd, by reaſon of the Ingredients whereof they are compos'd. Their principal vertue is to comfort and fortifie the Heart and Noble-parts: they may be tak'n alone, at any time; but their chief uſe is in Juleps and Cordial-Potions.

Tabellæ Cachecticæ, D. D. *D'AQUIN.*

℞. *Diaphoretici mineralis, &*
Oculorum Cancrorum præparatorum, an. ℥ß.
Margaritarum præparatorum, ℥ *ij.*
Salis Martis, ℥ ß.
Olei Cinnamomi ſtillatitii, *Gut. ij.*
Sacchari opt. pulverati, ℥ *viij.*

Tablets for thoſe that are troubl'd with an Ill-habit of Body, by D. D. D'AQUIN.

℞. Diaphoretic-mineral, and
Crabs-Eyes prepar'd, *an.* ℥ ß.
Pearls prepar'd, ℥ ij.
Salt of Steel ℥ ß.
Diſtill'd-oyl of Cinnamon, Drop ij.
Double-refin'd Sugar powder'd, ℥ viij.

Diſſolve over hot embers a dram of Gum-Tragacanth in four ounces of Orange-flower Water, and reduce it into a muſcilage, wherewith to unite and bind all the Ingredients preſcrib'd. Then beat them into a thick paſte, to make your Tablets of the weight of two drams each for a doſe, and dry them in the ſhade.

Theſe Tablets are of incomparable vertue to op'n gently all obſtructions of the Bowels, particularly of the Spleen.For which reaſon they are giv'n with great ſucceſs in Hypochondriac diſtempers and Cachexies: as alſo to cure the Green-ſickneſs, and difficulty of making Urine. They may be tak'n when you drink Mineral-waters,if they do not paſs through quickly as they ſhould. The doſe is one Tablet in a morning faſting, two hours before you eat any thing elſe.

Tabellæ Cardiacæ.	*Cordial Lozenges.*
℞. *Sacchari albiſſimi in Aqua florum Arantiorum ſoluti, & in Tabulati ſolidiorem conſiſtentiam cocti,* ℔ *j.*	℞. Double-refin'd Sugar diſſolv'd in Orange-flower Water, and boyl'd to the conſtency of a ſolid Electuary, ℔ j.

When the Sugar is boyl'd, take it off the fire; and when it is half-cold,

Permiſce,	*Mingle with it,*
Confectionis Alkermes perfectæ, ℥ *j.*	Confection of Alkermes perfect, ℥ j.
Corticis exterioris Citri minutiſſime inciſi, &	Outward-peel of Citron cut very ſmall, and
Antimonii Diaphoretici, an. ℥ *ij.*	Diaphoretic Antimony, *an.* ℥ ij.
Olei Cinnamomi ſtillatitii pauco Saccharo excepti, *Gut. j.*	Diſtill'd-oyl of Cinnamon mix'd with 2 drams of fine-powder Sugar, Drops j.

Mixe them well together, and pour out the whole upon a Plate of fine Tin, or upon a ſheet of white Paper to make your Tablets of what bigneſs you pleaſe.

Theſe Tablets are admirable to cheriſh the Natural-heat. They reſtore an extraordinary vigour immediately to all the parts, rallying the ſcatter'd Spirits. They powerfully ſtrength'n the Heart and Brain. They are an incomparable preſervative againſt Peſtilential air, they correct ill-ſmells of the Mouth and Breath. They are uſeful to thoſe that are in want of a Provocative to *Venerie*. They may be tak'n at any time, but eſpecially faſting, from a dram to two. But you may take half an ounce when you deſire a more powerful operation, eſpecially they that have weak Backs, to whom they will be of more force by adding half a dram of Amber-griſe and a ſcruple of Musk.

Tabellæ Stomachicæ.	*Stomachical Tablets.*
℞. *Sacchari albiſſimi,* ℔ *j.*	℞. Double-refin'd Sugar, ℔ j.
Aquæ Stillatitiæ corticum Citri, ℥ *iiij.*	Diſtill'd-water of Citron-peels, ℥ iiij.

Boyl them over a moderate fire to the conſiſtency of a ſolid Electuary.

Deinde adde,	*Then add,*
Nucem Moſchatam Saccharo conditam contuſam, & per Cribrum trajectam,	One Nutmeg condited with Sugar, powder'd and paſs'd through a Sieve,
Pulpæ Piſtaciarum, ℥ *vij.*	Pulp of Piſtaches, ℥ vj.
Corticum recentium exteriorum Citri, & Arantiorum minime inciſorum,	New outward Citron and Orange-peels cut very ſmall,
Cinnamomi electi, &	Choice Cinnamon, and
Macis ſubtiliter pulveratorum, an. ℥ *ij.*	Mace finely powder'd, *an.* ℥ ij.

Beat the Nutmeg in a Marble-mortar with a woodd'n peſtle and ſix drams of pulp of Piſtaches, and paſs them through the wrong ſide of a Hair-ſieve; cut the peels very ſmall, powder the Cinnamon and Mace. Then put in firſt the Nutmeg and Piſtaches, after that the Peels, then the Powders; and when they are all well-incorporated make up your Tablets.

Theſe Tablets are of a moſt pleaſing ſcent and odour. They are call'd *Stomachical*, becauſe of their incomparable vertue to ſtrength'n the Stomach, to increaſe the Appetite and facilitate Concoction and Diſtribution of the Nouriſhment. They are marvellouſly effectual to expel Wind and hinder the putrefaction of the Humours. The doſe is two drams faſting and juſt after meals, the uſe whereof you may continue as you ſee cauſe.

Tabulæ contra Vermes.

℞. *Rhabarbari electi,*
Seminum Citri mundatorum,
Contra Vermes,
Portulacæ,
Caulium, &
Geniſtæ ſubtiliter pulverati, an. ℥ *iij.*
Mercurii dulcis pulverat. ℥ *ij.*
Sacchari Albiſſimi pulverat. ℥ *xvj.*

Lozenges againſt the Worms.

℞. Choice Rhubarb,
Seeds of Citron Cleans'd,
Worm-Seed,
Purſlane,
Coleworts, and
Brome finely powder'd, *an.* ℥ iij.
Sweet Mercury powder'd, ℥ ij.
Double refin'd Sugar powder'd, ℥ xvj.

Beat all the Ingredients into fine powder, mixe and incorporate them very well together with mucilage of Gum-Tragacanth drawn with Orange-flower Water, and having reduc'd the whole into a paſte ſomewhat ſolid, make up your Tablets each weighing a dram, of which give one or two to a Child in a morning, faſting, and three or four at a time to Perſons of riper Years.

Theſe Lozenges kill Worms in the Stomach and Bowels. They may be tak'n at any time in a morning faſting, but the beſt time is the three laſt days of the Moon.

Tabellæ de Croco Martis Simplices.

℞. *Croci Martis Nigri, junctione Sulphuris cum Chalybe candente parati, & ſubtiliter pulverat.* ℥ *j.*
Pulveris Cinnamomi elect. ℥ *ij.*
Sacchari optimi pulverat. ℥ *iiij.*

Single Lozenges of Crocus Martis.

℞. *Crocus Martis* prepar'd by applying a a Cake of Brimſtone to Steel red-hot, and powder'd, ℥ j.
Powder of pick'd Cinamon, ℥ ij.
Double-refin'd Sugar powder'd, ℥ iiij.

Incorporate them in a Marble-mortar with Mucilage of Gum-Tragacanth, reduce them into an indifferent thick paſte to make your Lozenges, each of the weight of two drams or thereabout, which are to be dry'd in the ſhade.

Theſe Tablets are chiefly againſt the Retention or Irregularity of the *menſtruums*, drinking after them three or four ounces of white Wine or ſome Hyſteric-water, and waking upon that for half an hour, not eating any thing in two hours afterwards. They may be tak'n for ſeveral days, and the uſe of them renew'd upon occaſion.

Tabellæ de Croco Martis Compoſitæ.

℞. *Croci Martis Aperientis,* ℥ *ij.*
Cinamomi acutiſſimi,
Rhabarbari Electi,
Facularum Bryoniæ, &
Croci opt. ſubtiliter pulveratorum, an. ℥ *ij.*
Sacchari Albiſſimi in Aqua Artemiſiæ ſolut. & in Electuarium ſolidum cocti, ℥ *ix.*

Compound Tablets of Crocus Martis.

℞. Opening Crocus Martis, ℥ ij.
The moſt biting Cinamon,
Chos'n Rhubarb,
Hard'n'd white Juice of Bryony-root, and
The beſt Saffron finely-powder'd, *an.* ℥ ij.
Double-refin'd Sugar diſſolv'd in Mugwort-water, and boyl'd to a ſolid Electary, ℥ ix.

When the Electuary is half-cold incorporate the powders, and make up your Tablets, each weighing about two drams.

Theſe Tablets are highly eſteem'd for provoking the *menſtruums*, and freeing the *Matrix* from impurities. They op'n the obſtructions of the Liver, Spleen, and all the Bowels, and are an excellent Remedy againſt the Green-ſickneſs, Cachexies, Jaundice, Dropſies; as alſo Lienteries. For by opening obſtructions, they facilitate the diſtribution of the Nouriſhment. The doſe is from two drams to half an ounce. They muſt be tak'n in a morning faſting, drinking after them two or three ounces of Wormwood-wine, or elſe as much Mugwort-water, and walking upon that for half an hour; They may be tak'n for fifteen days together, and longer if neceſſity requires. Two hours after, the Patient is at liberty to eat.

Tabellæ

Tabellæ Magnanimitatis.

℞. *Pulpæ Piſtaciarum.*
Radicum Satyrionis conditarum,
Conſervæ Florum Roriſmarini, &
Confectionis Alkermes cum Ambra & Moſco
paratæ, an. ʒß.
Truncorum Viperinorum, &
Hepatum,
Margaritarum Orientalium præparatarum,
an. ʒiij.
Seminis Erucæ, ʒij.
Renum Scincorum,
Cardamomi minoris,
Radicis Galangæ, an. ʒj.
Caryophyllorum,
Cinnamomi,
Macis,
Ambræ Griſeæ, an. ʒß.
Moſchi Orientalis, ∋ß.
Sacchari in Aqua Florum Arantiorum ſo-
luti, & in Electuarium ſolidum cocti,
℔j.

Lozenges of Magnanimity.

℞. Pulp of Piſtaches,
Condited Roots of Satyrion.
Conſerve of flowers of Roſemary, and
Confection of Alkermes prepar'd with
Amber and Musk, *an.* ʒß.
Bodies of Vipers, and
Livers,
Oriental Pearls prepar'd, *an.* ʒ iij.

Seed of Rocket,
Reins of Land-Crocodiles,
Leſſer Cardamoms,
Root of Galanga, *an.* ʒj.
Cloves,
Cinnamon,
Mace,
Ambergriſe, *an.* ʒß.
Oriental Musk, ∋ß.
Sugar diſſolv'd in Orange-water, and
boyl'd to a ſolid Electuary, ℔j.

Beat the Piſtaches, Satyrion-roots and Conſerve of Roſemary-flowers in a Marble-mortar; and ſtrain the Pulp through the wrong ſide of a Hair-ſieve. Pulverize the Bodies and livers of Vipers, and Land-Crocodiles; the Root of Galanga, the Cardamoms, Cloves, Mace, Ambergriſe and Musk, mixe them with the prepar'd Pearls, and when the Sugar boyl'd in Orange-flower Water to a ſolid Electuary is half-cold, incorporate the Pulp, Confection and Seeds; and make your Lozenges about two drams each.

Theſe Lozenges are highly eſteem'd for thoſe that are cold in the act of *Venerie*. Take one or two at a time at Night or Morning, drinking after it two or three ounces of *Spaniſh*-wine. They may be eat'n alſo in the Day-time between Meals, one Lozenge at a time, uſing them as long as neceſſity requires. In the mean time the Patient muſt take care to keep a good Diet, and to avoid melancholy.

CHAP. XIX.

Of Powders.

THE Name of Powder is giv'n to dry Subſtances, when either by Art or Nature they are reduc'd into diſtinct particles, one from the other. This Natural reduction happ'ns to Wood through rott'nneſs, as alſo to ſeveral Roots, and to Lime after it is burnt. But theſe Natural Powders are not the ſubject of this Chapter, which is to treat only of Artificial Powders, whoſe Subſtance may be divided into ſmaller or groſſer parts, according to their diverſity, and the neceſſity of the *Apothecary*. The way to make this Reduction I have ſpok'n of in the Chapter of *Trituration*. The neceſſity of Powders is allow'd both by the *Galenic* and *Chymic-Pharmacy*, without which the moſt part of Medicines are not to be prepar'd; but ſetting aſide particular Powders prepar'd for particular Medicines, in this Chapter I ſhall only treat of thoſe that go under the general Name of Powders, and are ſo acknowledg'd to be, as being moſt uſually prepar'd and kept.

Pulvis Viperinus.

℞. *Corpora Viperina cute ſpoliata, Capite & Cauda mutila, exenterata, ſervatis Corde & Hepate, & in umbra ſiccata, quantum libuerit.*

Powder of Vipers.

℞. The Bodies of Viper's flea'd (the Head and Tail cut off, the Entrails tak'n out, reſerving the Heart and Liver) as many as you pleaſe.

Waſh the Bodies, Hearts and Livers with white Wine, and hang them up to dry in the ſhade. When they are perfectly drie, cut them very ſmall with a pair of Sciſſors into a large Braſs-mortar, and having beat'n them to powder, ſift them through a Silk-ſieve, and keep the powder for your uſe.

The great applauſe that the greateſt number of Naturaliſts have giv'n to Vipers, the groſs miſtakes of the Ancients, as well in relation to the parts of their Bodies, as the nature of their Venome, and the great uſe that has been made of them for this many Years, and particularly in this Age, have encourag'd me briefly here to deſcribe the principal markes that diſtinguiſh them from other Serpents, and give us an aſſur'd knowledg of them.

The Viper's Head, conſidering the proportion of her Body, is flatter and larger, then the Head of any Serpent. The end of the Snout turns up like a Pig's. The length of the Body is not above half an Ell, and the bigneſs not above an Inch. It has two large Teeth, crooked, hollow, tranſparent and very ſharp, about 2 * *Lignes* long, and as big as a little Pin towards the point, and a little more towards the bottom, which other Serpents have not. They are ſtrongly joynted into the foremoſt bones forward from the Scull, flexible in their joynting, and fix'd upon each ſide of the upper-Jaw. Below adjoyning to the root of theſe great Teeth, are others much a-like in ſhape and figure, but ſlenderer and much looſer. Theſe great Teeth lie generally bow'd toward the Throat of the Viper, but ſhe can raiſe them, and make uſe of them to bite when ſhe pleaſes, either in revenge or to kill her prey. The bottom of theſe great Teeth is environ'd with a little bag, containing, to the quantity of a drop, a Juice ſlimy, yellow, inſipid and harmleſs, which proceeds from a great number of ſlimy-kernels, which the Viper has incluſter'd behind each Eye toward the Temples, which is let out and kept in, as in a Receptacle, to diſcharge the ſuperfluities of the Brain, to moiſt'n the Ligaments that belong to the Articulation of the great Teeth, and to preſerve their flexibility, and to nouriſh the other Teeth. The Viper has but one row of Teeth upon each Jaw, whereas other Serpents have two. The neck is not ſo long, and leſs thick; the Tail is alſo ſhorter then that of other Serpents, eſpecially that of the Female. The Viper has no ſtinking ſmell in any part of her Body, whereas the inwards of other Serpents are ſo noyſom as not to be endur'd. The Viper creeps very ſlow, nor can it ſhoot forwards as other Serpents do; though it be very quick and nimble to bite Man or Beaſt when provok'd. Some have vainly affirm'd that being hung by the tail it cannot rear it ſelf. But though it cannot do it ſo quickly as other Serpents, however it will be ſure to raiſe it ſelf, and lay hold upon the Pincers with which you hold her by the tail. The Teeth of the Male are like thoſe of the Female in number and ſhape, contrary to the opinion of the Ancients, and his Natural-parts doubly cover'd with hard and ſharp points. The Female has alſo a double Matrix, though the firſt entrance be not ſo. The upper-part of the Body of both are of two colours, the ground whereof is generally of a grey, more clear or more dark, or elſe of a yellow more inclining to gold'n, or to red. This Ground is very proportionably variegated with long ſpots of a brown colour inclining to black. The long Scales a-thwart the Belly, which ſerve them to creep withal, are of the colour of poliſh'd Steel. The Viper alſo differs from other Creatures in this, that ſhe brings forth her Young-ones alive, whereas other Serpents lay Eggs, which they ſit upon and hatch.

* *The twelfth part of an Inch.*

This Powder is very much enliven'd with the volatile Salt, wherewith the Vipers abound, which enables it to force its vertues through the Pores, though never ſo cloſe-ſhut, to the moſt remote parts of the Body. It is a ſingular Medicine to cure Scabs, Itches and Eryſipelas; and particularly the Leproſie. It reſtores plumpneſs of Body to Perſons waſted with long Agues and tedious Diſeaſes. It gives remarkable relief to the Ptiſical and Conſumptive, preſerves the Natural-heat, aſſiſts Concoction, and diſtribution of the *Chylus*. The uſe of it is very wholſom in Epidemic diſtempers, and

to

to prevent and overcome Venomes that act by a malignant occult quality, particularly that of the Viper, and all sorts of Serpents. It is to be tak'n fasting in Broths, Wine, or any other Cordial Liquor; or else incorporated with some Syrup, or in some Confection like a Bolus. It may be also mix'd in Opiates, or in liquid or solid Electuaries, as also among other Powders. The dose is from ten to twenty or thirty grains, as also to a dram. It works insensibly, not provoking Sweat, unless the dose be great. It may be also tak'n for a good while together.

Pulvis Comitissæ Cantii, seu de Chelis Cancrorum.

℞. *Extremitatum nigrorum pedum majorum Cancrorum marinorum,* ℥ iiij.
Oculorum Cancrorum fluviatilium,
Margaritarum Orientalium, &
Coralli Rubri præparatorum, an. ℥ j.
Succini Albi,
Radicis Contrayervæ,
Viperinæ, seu
Contrayervæ Virginianæ, an. ʒ vj.
Lapidis Bezoar, ʒ iij.
Ossis è Corde Cervi, ϑ iiij.
Croci, ϑ ij.

The Countess of Kent*'s Powder: or, The Powder of Crabs-Claws.*

℞. The black extremities of the feet of large Sea-Crabs, ℥ iiij.
River-Crabs-Eyes,
Eastern-Pearls, and
Red-Coral prepar'd, *an.* ℥ j.
White Amber,
Root of Contrayerva,
Spanish-Counterpoyson, *an.* ʒ vj.
Bezoar-Stone, ʒ iij.
Deer's Heart-bone, ϑ iiij.
Saffron, ϑ ij.

All these being finely powder'd, let them be sprinkl'd with an ounce and a half of Spirit of Honey, and mix'd with Gelly of Vipers. Make up your Trochishes, dry them in the shade to be powder'd when use requires.

Take the Sea and the River-Crabs in the Month of *June*, while the Sun is in *Cancer*. Take and cut the Flesh from the extremities of the Claws, bruise the Claws and Crabs-Eyes in a Brass-mortar first, then grind them upon a Porphyrie, moist'ning them with some Cordial-water; and spread the Powder upon clean Paper, to be dry'd in the shade. Prepare the Pearl, Coral, and Amber-grise in like manner. Beat the Bezoar in a Brass-Mortar, and mix all the Powders. Then in a glaz'd-Earth'n-pot over a very gentle fire, boyl four large Vipers, well prepar'd, in a pint of Balm-water, till the Broth be reduc'd to the consistency of a Gelly. Strain it and press out the Vipers. Then put the Powders into a great Marble-Mortar; and when they have suckt up the Honey prescrib'd, add at several times the Gelly of Vipers, till the whole Mass be become thick and solid enough to make Trochishes, to be dry'd and us'd as before.

The Gelly of Vipers, is not only to unite and bind the Powders together, and reduce them to a proper Paste and fit solidity, but to impart to the Composition, the Cordial, and Poyson-resisting vertue of the Vipers, though the Ancients neglected the Gelly of Vipers, and refus'd it as Impertinent.

I might have plac'd this Composition in the Chapter of Trochishes, but I thought fit to imitate the English, from whence first it came, and who gave it the name of Powder.

This Powder is very famous, and in high request in *England*, against Epidemic Distempers, particularly against the Small-pox, and Measles. It is also highly commended for the Plague, as well to preserve, as cure. For it strength'ns the Heart, and all the Noble-parts, against the malignity of these Diseases, against Pestilential-Air, and preserves them from all sorts of Infection. Nor is it less esteem'd in *France*, by Persons that know the vertue of it, and who have often try'd it with good success. The Dose and manner of using it, is the same with that of the Spirit of Vipers.

Pulvis Aromatici Roſati.

℞. *Roſarum Rubrarum exungulatarum ſiccarum*, ʒ *xv.*
Glycyrrhizæ Raſæ, ʒ *vij.*
Cinnamomi Acutiſſimi, ʒ *v.*
Ligni Aloes,
Santali Citrini, ana. ʒ *iij.*
Caryophyllorum,
Macis,
Nardi Indicæ
Gummi Arabici,
Tragacanthi, an. ʒ *ij* ß.
Nucis Moſchatæ,
Cardamomi minoris,
Galangæ, an. ʒ *j.*
Ambræ Griſeæ, ∋ *ij.*
Moſchi Orientalis, ∋ *j.*

Powder of Aromatic Roſatum.

℞. Dry red-Roſes cleans'd from their white bottoms, ʒ xv.
Scrap'd Liquorice, ʒ vij.
Quick-biting Cinamon, ʒ v.
Lignum Aloes,
Yellow Saunders, *ana.* ʒ iij.
Cloves,
Mace,
Indian Spikenard,
Gum-Arabic,
Tragacanth, *an.* ʒ ij ß.
Nutmegs,
Leſſer Cardamom.
Galanga, *an.* ʒ j.
Amber-griſe, ∋ ij.
Oriental Musk, ∋ j.

According to the general Rules of Trituration, bruiſe and pound the Wood firſt in a brazen-Mortar, then add the Galanga, Liquorice, and Spikenard: which muſt be beaten for ſome time with the Wood: next add the Cinamon and Gums; Laſtly, the Cloves, Nutmegs, Cardamoms, Mace, and Red-Roſes: beat them among the reſt, and ſift the Powder through a fine ſilk-ſieve. Then beat a-part in a little Mortar the Amber-griſe, and Musk, mixing with them, never ſo little Oyl of Nutmegs, to prevent them from ſticking to the Mortar, and having ſifted them through the ſame ſieve, mix them with the reſt of the Powders; which will be then fit to be put up for uſe.

Were there a greater quantity of Gum-Arabic, and Tragacanth in the Powder, the beſt way would be to beat them apart in a large brazen-Mortar heated, but being ſo little, they may be conveniently enough beaten with the reſt. It is not worth while to ſtand to cut the Woods, or the Spikenard, when you may do as well by beating them in the large Mortar, with the reſt of the Drugs.

This Powder is highly eſteem'd for ſtrength'ning the Brain, and Stomach. It diſſipates the ſuperfluous moiſture of the Entrails, reſiſts Putrefaction, creates an Appetite, ſtays Vomitings, and want of retention in the Inteſtines, and is very proper to ſtrength'n and reſtore ſuch as are newly recovered from ſickneſs. The Doſe is from half a ſcruple to half a Dram in Wine, Broth, or any Cordial-Liquor. It may be reduc'd into a ſoft or ſolid Electuary, with a proportionable quantity of Sugar, or mixt with Opiates, Potions, or other Medicines.

Pulvis Diarrhodon emendatus.

℞. *Roſarum Rubrarum exungulatarum*, ʒ *j* ß.
Santali Citrini, & Rubri, an. ʒ *iij.*
Ligni Aloes,
Cinnamomi,
Rapontici,
Nardi Indicæ,
Raſuræ Eboris,
Oſſis e corde Cervi,
Crooi,
Maſtices,
Cardamomi minoris,
Gummi Tragacanthi, & Arabici,
Succi Glycyrrhizæ,
Seminis Aniſi,
Fœniculi,

The Powder Diarrhodon, reform'd.

℞. Red Roſes cleans'd, ʒ j ß.
Yellow-Saunders and Red, *an.* ʒ iij.
Lignum Aloes,
Cinamon,
Rhubarb of *Pontus*,
Indian-Spikenard,
Shavings of Ebony,
The bone of a Deers-heart,
Saffron,
Maſtick,
Leſſer Cardamom,
Gum-Tragacanth, and Arabic,
Juice of Liquorice,
Seed of Anniſe,
Fennel,
Ocymi,

Ocymi,		Basil,	
Melonum, &		Melons, and	
Cucumeris, mundatorum, &		Cucumbers, cleans'd and	
Margaritarum præparatarum, ana.	℥j.	Prepar'd Pearls, *an.*	℥j.
Ambræ-grisiæ,	*Gr. viij.*	Amber-grise,	Gr.viij.
Moschi Orientalis,	*Gr. iiij.*	Oriental Musk,	Gr.iiij.

Make a Powder according to Art.

They who will compare the Receipt of this powder, with that which is to be found in several Dispensatories, under the name of an Abbot, will find that the Doses are reform'd; that the Yellow-Saunders is put instead of the White, the shavings of Ivory, in the stead of *Spodium* or burnt-Ivory, Rha-Pontic instead of Rhubarb, and that several Seeds are left out, which gave more trouble to the Artist, then vertue to the Medicine. There is no question, but that Yellow-Saunders is better then White, and that Rhubarb whose purgative vertue is not proper upon this occasion, ought to give place to Ra-Pontic, whose qualities agree with the purposes for which this powder was design'd. There is nothing superfluous in this powder, and the Doses and proportion of the Ingredients are such, that the effects cannot but be answerable to what Writers have attributed to this composition.

This powder is of great use to fortifie the Stomach, create an Appetite, and expel Wind. It is particularly appointed for maladies of the Liver and Spleen, Jaundies, Ptisicks, difficultness of the Intestines, Weaknesses and Faintings of the Heart. It also consumes the superfluous moistures of the Stomach. The Dose and manner of using this powder is the same with the preceding.

Pulvis Diamargariti Frigidi.

Powder of cold Diamargaritum.

℞. *Margaritarum Orientalium præparatarum,*	℥ß.	℞. Oriental Pearls prepar'd,	℥ß.
Rosarum rubrarum exungulatarum,		Red-Roses cleans'd,	
Florum Nymphææ, &		Flowers of Water-Lillies,	
Violarum, an.	℥ iij.	Violets, *an.*	℥ iij.
Ligni Aloes,		Lignum-Aloes,	
Santali Rubri, &		Saunders Red, and	
Citrini,		Yellow,	
Radicis Tormentillæ,		Roots of Tormentil,	
Dictamni Albi,		White Dittany,	
Pentaphylli,		Cinquefoyl,	
Baccarum Myrti,		Myrtle-berries,	
Granorum Kermes,		Graines of Kermes,	
Seminis Melonum excorticati,		Seeds of Melons husk'd,	
Endiviæ, &		Endive, and	
Oxalidis,		Sorrel,	
Rasuræ Eboris, &		Shavings of Ivory,	
Cornu Cervi,		Harts-horn,	
Coralli Albi, &		Coral White, and	
Rubri præparatorum, an.	℥ij.	Red prepar'd, *an.*	℥ij.
Ambræ-Grisiæ, &		Amber-grise, and	
Foliorum Auri, an.	℥ß.	Leaves of Gold, *an.*	℥ß.
Moschi Orientalis,	*Gr.iiij.*	Oriental Musk,	Gr. iiij.

Make a Powder according to Art.

There is no composition in request, the Receipt whereof varies more in all Dispensatories then this Powder, that bears the name of no Authour. However, I am perswaded that this very Receipt is not inferiour to any of the other, as well for the choice, as for the Doses of the Ingredients. This Powder carries the name of *Pearls*, which are the foundation of it, and are us'd in greater quantity here, then any other of the Ingredients. It is call'd cold, because it admits of many cold Ingredients, or else but moderately hot, and to distinguish it from another which is nam'd the hot, which

which is not now in uſe. The preparation of this Powder is like the former.

The principal uſe of cold Diamargaritum is to ſtrength'n the Noble-parts, reſtore their languiſhing force, to cure fainting and Swouning-fits, in Fevers, and other Diſeaſes. It is giv'n to Aſthmatic, and Conſumptive perſons, and to thoſe that are waſted and brought low by long ſickneſs. The Doſe and manner of uſing, are the ſame with other Cordial-powders, which I have already ſet down.

Pulvis Lætificans.

℞. *Seminis Ocymi Caryophyllati,*
Croci,
Zedoariæ,
Santali Citrini,
Caryophyllorum,
Corticis exterioris Citri ſicci,
Galangæ,
Macis,
Nucis Moſchatæ,
Storacis Calamitæ, an. ʒ ij ß.
Raſuræ Eboris,
Seminis Aniſi,
Thymi,
Epithymi,
Margaritarum Orientalium præparat,
Oſſis é corde cervi, an. ʒ j.
Ambræ-Griſiæ,
Moſchi Orientalis,
Foliorum Auri et
Argenti, an. ϑ j.

A Powder creating Chearfulneſs.

℞. Seeds of Clove-Baſil,
Saffron,
Zedoary, or Set-wall,
Yellow-Saunders,
Cloves,
Outward peel of Citron, dry,
Galanga,
Mace,
Nutmeg,
Calamite Storax, *an.* ʒ ij ß.
Shavings of Ivory,
Anniſe-ſeed,
Thyme,
Dodder of Thyme,
Oriental Pearls prepar'd,
Deer's Heart-bone, *an.* ʒ j.
Ambergriſe,
Oriental Musk,
Leaves of Gold, and
Silver, *an.* ϑ j.

Make a Powder according to Art.

It imports not to know the Name of the Inventor of this Powder, the Receipt whereof agrees indifferently well in moſt Diſpenſatories. You may follow this which I have here ſet down; the Preparation being the ſame with the former. You muſt know, that though the Leaves of Gold and Silver may contribute ſome vertue to this, and other compoſitions; yet they are here chiefly us'd for Ornament. For which reaſon they are not uſually pulveriz'd and jumbl'd with other Ingredients, but cut in little diſtinct bits, for beauty's ſake, as Pills, and Cordial-Opiates are wrapt up in them to take away the ill taſt.

This Powder is highly eſteem'd to correct the cold and moiſt temperature of the Stomach and Liver, to help Digeſtion, and reſtore the Appetite. It is alſo very proper againſt Weakneſſes, and Palpitations of the Heart, to reſtore a good habit of Body, and to bring a good colour into the Face, to keep the Breath ſweet, reſtore decay'd Strength, and diſſipate Melancholy that proceeds from an Internal or no real cauſe. The Doſe is the ſame with the preceding Powders.

Pulvis Diatrion Santalon.

℞. *Santali Citrini,*
Albi, et
Rubri,
Seminis Violarum,
Roſarum Rubrarum Exungulatarum,
an. ʒ ß.
Rapontici,
Raſuræ Eboris,
Succi Glycyrrhiza, an. ʒ ij.
Gummi Tragacanthi, et
Arabici,

Powder of the three Saunders.

℞. Saunders Yellow,
White, and
Red,
Seeds of Violets,
Red Roſes cleans'd, *an.* ʒ ß.
Pontic Rhubarb,
Shavings of Ivory,
Juice of Liquorice, *an.* ʒ ij.
Gum Tragacanth, and
Arabic,

Seminum

Seminum Endiviæ,		Seeds of Endive,	
Portulacæ, &		Purſlain,	
Melonis excorticati, an.	ʒj.	Melons husk'd, *an.*	ʒ j.

Make a Powdor according to Art.

They that deſire to make the Powder more red, beginning with the Saunders, muſt moiſten them with Roſe-water, and beat them a long time, and moiſten them often, till they are ſufficiently colour'd, and when they are dry, add the other Ingredients, and perfect the Powder, which muſt be ſifted through a fine ſilk ſierce.

I am of opinion that the Amydon, or flower of pounded Wheat, together with ſome part of the Seeds were with judgement left out; for beſides that the Amydon ſignifies nothing, the exceſs of Seeds might cauſe putrefaction in the powder.

This powder is highly commended againſt Diſeaſes that proceed from weakneſs, or ill habit of the Liver; to temper the heat of the Entrails, to digeſt and diſcuſs matters gather'd together at the end of Agues. It is alſo very proper in faintings of the Heart, Jaundies, and Ptiſicks. It is giv'n inwardly in Potions, Opiates, and Electuaries, and outwardly apply'd in Epithems, Frontals, and Liniments.

Pulvis Pannonicus.

℞. *Boli Armenæ, &*		℞. Bole Armonack, &	
Terræ Lemniæ, an.	ʒ j ß.	Lemnian Earth, *an.*	ʒ j ß.
Margaritarum Orientalium,		Eaſtern Pearls,	
Lapidum Hyacinthorum,		Stones, Jacinths,	
Smaragdorum,		Smaragds,	
Saphyrorum, et		Saphyrs, and	
Rubinorum, et		Rubies,	
Coralli Albi, et		White-Coral, &	
Rubri, præparatorum,		Red prepar'd,	
Radicum Tormentillæ,		Roots of Tormentil,	
Doronici, et		Doronicum or Wolfs-bane, and	
Dictamni Albi,		White Dittany,	
Santali Citrini,		Yellow Saunders,	
Raſuræ Unicornis, et		Shavings of Unicorns-horn, and	
Eboris, an.	ʒ ß.	Ivory, *an.*	ʒ ß.
Corticis Citri exterioris ſicci, et		Dry outmoſt Citron-rind, and	
Seminis Acetoſæ, an.	ʒ *iij.*	Seed of Sorrel, *an.*	ʒ *iij.*
Cinnamomi acutiſſimi	ʒ j.	Biting Cinamon,	ʒ j.
Caryophyllorum et		Cloves, and	
Croci, an.	ʒ ß.	Saffron, *an.*	ʒ ß.
Folia Auri puriſſimi,	N°. *xxv.*	Leaves of pureſt Gold,	N°. *xxv.*

Raſp the Unicorns-horn, and Ivory; beat the Pearls, Stones, as alſo the Coral, and Bole-Armonac in a Mortar, then grind them upon a Porphyrie-ſtone, till the Powder is not to be felt, moiſtning them now and then with Roſe-water: make them into Trochiskes and let them dry in the ſhade. Beat the Unicorns-horn and Ivory, in a great Brazen-Mortar, with the Saunders and the Roots; then put in the Cinamon, dry Citron-Peel, and then the Cloves, and Sorrel-ſeed, and ſift them them through a ſilken ſierce. Dry the Saffron and beat it apart; then having mix'd all the Powders with the Stones, Corals, Bole-Armonac, and Terra-ſigillata, cut the Leaves of Gold in ſmall bits. Mix an ounce and a half of this Powder with twelve ounces of fine Sugar diſſolv'd in Roſe-water, and you may boyl it up to the conſiſtence of a ſolid Electuary, and make it into Tablets.

Unicorns-horn is reckon'd among the number of Medicaments, which being but a part of a mixt body, bears the Name of the whole; ſo that when the Unicorn is only ſet down, the Horn is only preſcrib'd. This Creature is by the Greeks called Μονόκερως, by the Latins, *Unicornis*. Writers vary very much about the deſcription of this Animal. The moſt part make it in the body to reſemble a Horſe, and that he has one horn wreath'd like a Periwinkle-ſhell, ſometimes longer, ſometimes ſhorter, fix'd at the upper part of the fore-part of the Head; ſtreight and pointed at the end. However, none

of them affirm that they have ſeen the Creature which they deſcribe, nor do they ſay where he is bred. And therefore ſome queſtion whether the Unicorn ſpoken of in the old Teſtament, were a Beaſt like that which our Naturaliſts have deſcrib'd under the ſhape of a Horſe, and whether it did not mean the Rhinoceros, by that which our Interpreters call a Unicorn, though the ſtreight and twiſted ſhape, and white colour which the Naturaliſts attribute to the Unicorn's-horn, is nothing agreeable to that of the Rhinoceros, which is not twiſted, but crooked from the bottom, with the end turn'd upward; and beſides is of a brown colour. But among all theſe conteſts of Natural Philoſophers, my thoughts are that there is no ſuch Unicorn in the World as they have deſcrib'd; but that this white, hard, heavy, twiſted horn, hollow within, and from one to two ells long, which we uſe in Phyſic, is the horn of a great Fiſh which is found in *Groynland*, which the Iſlanders call *Narwall*. This horn ſerves him as a defence againſt other Fiſh, and to kill the greater Whales, of which he is ſo fearleſs, that he will endeavour ſometimes with a great impetuoſity, to bore a hole in a great ſhip. The horns of this great Fiſh were formerly very rare, and the Fiſh that bare them very little known. But the frequent fiſhing in thoſe Seas, have rendred them leſs rare in *England*, *Holland*, *Germany*, *Denmark*, and other places; and without ſeeking any farther, I have one by me at this preſent, longer and bigger then that in the Treaſury of St. *Dennis*.

The rarity of this Horn was the reaſon that it was ſo much eſteem'd in former times, and that they attributed ſuch extraordinary vertues to it, as well in reſiſting poyſon, as againſt the Small-pox, Meaſles, and all Epidemic Diſtempers. Inſomuch, that we ſee in the Cabinets of great Perſons long pieces of this horn adorn'd and enchac'd in Gold, as being ſtill eſteem'd a moſt precious rarity, and of an inexhauſtible vertue, that imparts it ſelf without waſt to all Liquors wherein it is infus'd, like *Regulus* or Glaſs of Antimony. But though the volatile ſalt with which this horn abounds, may produce the effects expected from it; yet the vertue once imparted to any Liquor by the horn is loſt for ever to that part; as it happens to Harts-horn or Ivory, whoſe parts are much of the ſame nature with this Unicorn's-horn, which being boyl'd or infus'd looſe all their vertue.

Doronicum is a Plant which many of the Ancients deſcrib'd under the name of *Aconitum Pardalianches*, *Plantaginis folio*, the Leaves being like Plantain, but yellower. The Flowers are like thoſe of the Corn-Marigold. The Root here preſcrib'd is knotty and bearded, of a ſweetiſh taſt, and viſcous ſubſtance. It kills Leopards, Wolves, and Dogs, and the moſt part of four-footed Beaſts, though it is not hurtful to Man, but rather a great Antidote againſt Poyſons.

This Powder is very much us'd in the North-parts, eſpecially in *Germany*, where it is us'd in Malignant Fevers, and all Epidemic Diſtempers, and againſt all ſorts of Poyſons. It prevails wonderfully againſt the Small-pox, for it expels the malignity forth, and ſtrength'ns the Noble-parts. They uſually diſſolve it in ſome Cordial-water, ſweetn'd with Syrup of Gillow-flowers, Lemons or Granates, and take it faſting from half a ſcruple to half a dram. The Tablets tak'n one in a morning faſting, produce almoſt the ſame effect againſt Peſtilential-Air.

Pulvis Antipilepticus, D. D. *D'AQUIN.*

℞. *Radicis Pæoniæ maris, in eunte vere, & decreſcente Luna collectæ, &*
Seminis ejuſdem,
Radicis Dictamni albi,
Viſci Quercini,
Raſuræ Cranii Hominis violenta morte peremptι,
Unicornis,
Eboris,
Ungulæ Alcis, an. ℥j.

An Antipileptic Powder by Monſieur D'AQUIN.

℞. Roots of Male-Piony gather'd at the beginning of the Spring, in the decreaſe of the Moon, and
Seed of the ſame,
Roots of white-Dittany,
Miſletoe,
Shavings of a Man's Skull that dy'd a violent death,
Of Unicorn's horn,
Of Ivory,
Hoof of an Elke, *an.* ℥j.

Mar-

Margaritarum Orientalium,		Oriental Pearls,	
Lapidum Hyacinthinorum, &		Jacinth-Stone, and	
Coralli Rub. præparatorum an.	ʒß.	Red Coral prepar'd, *an.*	ʒß.
Seminis Ocymi Caryophyllati,		Seeds of Clove-Basil,	
Florum Tiliæ,		Flowers of Tylet,	
Betonicæ,		Betony,	
Lillii Convallium, an.	ʒ ij.	Lilly Convally, *an.*	ʒ ij.
Ambræ-Grisiæ,	∋ß.	Amber-grise,	∋ß.
Orientalis Moschi,	*Gr. vj.*	Oriental Musk,	Gr. vj.
Folia Auri purissimi,	*N°. xv.*	Leaves of finest Gold,	N°. xv.

Procure the Ingredients true, take only the end, or tip of the Elk's-Horn, and rasp it, and prepare the Powder as before.

The Elke by the Latins call'd *Alce,* is a Creature that breeds in the Woods of the Northern Countries, particularly in *Norway,* as big as a large Horse, of a fallow colour, and somewhat shap'd like a Hart, but bigger and fuller-body'd. He has a Leg long and slender, and a foot cloven like the Hart; but his Horns are flat and broad, like those of a fallow-Deer's, and hairy toward the lower end. Some Natural Philosophers report this Beast to be so swift, that it were impossible to take them, did not they that hunt them observe the time, when they are troubled with the falling-sickness, which oft-times happens, and then take them before they have strength enough to put their left foot in their Ears. For if they give them time, they immediately recover, rise, and run for their lives. Which is the reason that the Elk's-Hoof is said to have power alone to cure the Epilepsie, being either tak'n inwardly, or hung about the Neck of the Patient.

Children born in the Southern Countries are more subject to Epilepsies, then those that are born in the Northern Climates; and more subject to Worms, which oft-times cause their Epilepsie. These Epileptic Powders are of great use, both for little and great. They prevail greatly against the Apoplexy, Palsie, and all Diseases proceeding from abundance or over-flowing of humours in the Brain. The same Dose as of other Cordial Powders is usually given in Cephalic Waters. They may be also mix'd with Opiates, Tablets, or other Remedies.

Pulvis contra Rabiem.

℞. *Foliorum Rutæ,*		℞. Leaves of Rue,	
Verbenæ,		Vervain,	
Salviæ Minoris,		Lesser Sage,	
Plantaginis,		Plantain,	
Polypodii,		Polipody,	
Absinthii Vulgaris,		Vulgar Wormwood,	
Menthæ,		Mint,	
Arthemisiæ,		Mugwort,	
Melyssophylli,		Balm,	
Betonicæ,		Betony,	
Hyperici,		St. John's-wort,	
Centauri Minoris, an.	*partes æquales.*	Lesser Centaury, *an.*	equal parts.

A Powder againg Dog-madness.

Gather all these Herbs about the Full of the Moon in June, *when every one of them flourishes in its greatest vertue, and in fair Weather, make them up into little bundles, bind them about with Paper, and hang them in the Air out of the Sun to dry. When they are quite dry, beat them in a large Brazen Mortar, and sift the Powder through a silken sierce.*

This Powder was invented by Monsieur *Pirou,* and the Receipt is in a Treatise of the biting of a Mad-dog, writt'n by Monsieur *Palmerius,* a Physician of *Paris,* who affirms that he has often try'd it, and seen the wonderful effects of it, and that they that us'd it, had been cur'd of the *Fear of Water, so that they never had the Distemper; and that they that had it, had been freed from it by taking this Powder, provided they had

Hydrophobia, a Distemper occasion'd by the biting of a mad-dog.

not been bit in the Head, in the parts above the Teeth, or that they had not waſh'd the part bitt'n with Water; in which caſes he believes there is little hopes of cure.

Though the being plung'd into Sea-water, is accounted an infallible remedy againſt the biting of mad creatures, and that thoſe who are near it, generally have recourſe thereto: Yet this Powder deſerves to be prepar'd for thoſe that live at a diſtance from it. And I have had the opportunity formerly to prepare it exactly at Mr. *Noel Simard*'s in *Blois*, where I was a witneſs of the great vent he had for this Powder, eſpecially into the Countrey, and have heard the great applauſe that was given to it. He order'd it to be taken mix'd with half a dram of Powder of Vipers, in half a glaſs of good White-wine, in the Morning faſting, repeating the Doſe for nine days one after another, and ſometimes fifteen, for more ſecurity; and he aſſur'd me, that all that had tak'n it were cur'd. Monſieur *Palmarius* adviſes to augment the Doſe for ſtrong Perſons; which I am perſwaded may be done, there being no Ingredient in this powder, to hinder the augmentation of the Doſe. There are ſome that adviſe the Patient, at the time of taking this powder, to lay bruis'd Parſley upon the place bitt'n, which is no bad counſel.

Pulvis pro Dentifricio.

℞. *Radicis Ireos Florentiæ,*
Lapidis Pumicis,
Cornu Cervi, uſtorum,
Coralli Rubri præparati,
Oſſis Interioris ſepiæ,
Cremoris Tartari tenuiſſime Pulveratorum, an. ℥ j.
Moſchi Orientalis,
Civet, an. ʒß.
Oleorum ſtillatitiorum ligni Rhodii,
Caryophyllorum,
Cinamomi, an. *Gut. ij.*

A Powder for a Dentifrice.

℞. Root of Florence-Orrice,
Pumice-Stone,
Harts-horn burnt,
Red-Coral prepar'd,
The inner-Bone of the Cuttle-fiſh,
Creme of Tartar very finely pulveriz'd, *an.* ℥ j.
Oriental Musk,
Civet, *an.* ʒß.
Diſtill'd Oyls of Lignum Rhodium.
Cloves,
Cinamon, Drops ij

Mix them all well, and keep the Powder for uſe.

You muſt be careful to reduce all the Ingredients into an impalpable powder, for fear of fretting the Gums. You may eaſily incorporate the Musk pulveriz'd, the Civet, and the diſtill'd Oyls, with the reſt of the powders, without any fear of their being too clammy. No leſs eaſie will it be to reduce this powder into an Opiate by the mixture of equal parts of Syrup of Mulberries and Kermes, to give it the conſiſtency of an Opiate.

I know there is no want of powders and Opiates to whit'n the Teeth. But not to ſlight private Receipts, nor ſuch as are in the Diſpenſatories, I dare be confident that this is as good as any to cleanſe and whit'n the Teeth, whether made uſe of in powder or reduc'd to an Opiate. For it not only cleanſes and whitens the Teeth, but faſt'ns them, and keeps them from Rotting. The Syrups muſt be mix'd with the Powders in a Marble-mortar.

Pulvis alius compendioſior ad idem.

℞. *Lachrymarum elegantium Sanguinis Draconis, &*
Aluminis Romani uſti, ſubtiliſſime pulverat. an. ℥ ij.
Moſchi Orientalis, *Gr. iiij.*

A more compendious Powder for the ſame.

℞. The Neat Tears of Dragon's Blood, and
Roman Alum burnt, moſt finely pow-der'd, *an.* ℥ ij.
Oriental Musk, Gr. iiij.

Mix them according to Art for uſe, or elſe reduce them into an Opiate with equal parts of the aforeſaid Syrups mingled with the Powders.

This

This powder, though compos'd of fewer Ingredients, is not inferiour to the former, though not so cheap, because of the dearness of the Dragon's Blood in Tears. The richer sort, that value not expence, may add powder of Pearls, which will make the Opiate and powder never the worse.

The use of this powder is to rub the Teeth gently, Morning and Evening, or at any other time.

Pulvis Cephalicus Odoratus.

℞ *Radicis Ireos Florentiæ,* ℥ *viij.*
Santali Citrini, ℥ *iiij.*
Florum Lavendulæ,
Rosarum Rubrarum, &
Summitat. Majoranæ, an. ℥ *ij.*
Styracis,
Benjonis, ana. ℥ *ij.*
Takamahackæ Odoratæ,
Florum Lillii Convallium, an. ℥ *j.*
Caryophyllorum, ʒ *ij.*
Laudani,
Acori Veri, et
Cyperi Rotundi, an. ʒ *j.*

An Odoriferous Cephalic Powder.

℞ Root of Florence-Orrice, ℥ viij.
Yellow-Saunders, ℥ iiij.
Flowers of Lavender,
Red Roses, and
Tops of Marjoram, *an.* ℥ iij.
Storax,
Benjamin, *an.* ℥ ij.
Odoriferous Takamahacka,
Flowers of Lilly of the valleys, *an.* ℥ j.
Cloves, ʒ ij.
Laudanum,
The true sweet smelling flag, or Acorus, and
Round-rooted Cyperus, *an.* ʒ j.

Make them into a Powder thicker then ordinary; to which for the richer sort add of Musk, Civet, and Ambergrise, of each ten or twelve Grains.

This powder is usually apply'd, as well outwardly, as inwardly, which is the reason you need not beat them very small. The principal use of it is for Quilted-caps; the vertue of it is to strength'n the Brain. It may be also sow'd up in little cushions, or bags, and worn upon the Stomach or Heart, carry'd in the pocket, laid upon the pillow in Bed, or put among cloths and linnen in Chests, for the same purpose.

Pulvis contra Vermes.

℞ *Seminis contra Vermes,*
Citri mundati,
Genistæ,
Portulacæ,
Caulium,
Rhei Electi,
Scordii,
Centauri minori,
Radicis Gentianæ,
Rasuræ Cornu cervini, an. ℥ *j.*

A Powder to kill Worms.

℞ Wormseed,
Seed of Citron cleans'd,
Broom,
Purslain,
Coleworts,
Choice Rhubarb,
Water Germander,
Lesser Centaury,
Root of Gentian, &
Shaving of Harts-horn, *an.* ℥ j.

Reduce them all into a very fine Powder to be kept for use; when you use it, add some few Grains of Mercurius Dulcis.

This powder contains a collection of all that Physic has of specific against the Worms. The Dose is from half a scruple to half a dram, and as far as a dram, for those that are of Age. It may be giv'n in Wine, in Scordium, or Water-Germander, Purslain, or Orange-flower-water, or in a rosted Apple, in some Syrup, or Conserve. It may be mix'd in Opiates and Potions. It may be giv'n with some grains of *Mercurius Dulcis*, but then care must be tak'n that the Mercury be well mix'd, and that it do not sink to the bottom of the Glass. If their be occasion, this Powder may be made purgative, by mixing with it some Grains of Rosin of Scamony or Jalap; which oft-times succeeds very well, the Worms being thereby carry'd away which the powder has kill'd. The three last days of the Moon are to be made choice of, if possible to give this, and all other Remedies against the Worms, as proving then most successful.

Pulvis

Pulvis Digeſtivus.

℞. *Pulveris Viperini,*
Seminis Fæniculi dulcis,
Aniſi, &
Coriandri, an. ℥j.
Dauci, &
Ameos Creticorum, an. ℥ ß.
Corticis exterioris Citri ſicci,
Cinnamomi acutiſſimi, an. ʒiij.
Caryophyllorum,
Macis, an. ʒj.

A Powder for Digeſtion.

℞. Powder of Vipers,
Sweet Fennel-Seed,
Seeds of Aniſe, and
Coriander, *an.* ℥j.
Wild-Carrot, and
Biſhops-weed of *Candy, an.* ℥ ß.
Outward rind of Citron dry'd,
Sharp-biting Cinnamon, *an.* ʒiij.
Cloves,
Mace, *an.* ʒj.

Make all theſe into powder to mixe with equal or double the weight in Sugar.

ThisPowder is not unpleaſant,half a ſpoonful or a ſpoonful may be tak'n juſt after meals as long as neceſſity requires. It cheriſhes the Natural-heat, fortifies the Stomach,helps Concoction,expels wind, preſerves the Appetite,and reſtores it to thoſe that have loſt it; corrects the noyſom ſteams of the Stomach, and the ill-ſmells of the Mouth. The adding of two drams of Ambergriſe to this Compoſition will increaſe all its vertues.

Pulvis contra Abortum.

℞. *Margaritarum Orientalium præparatarum,*
Raſuræ Unicornis, &
Eboris,
Succini albi,
Coralli Rub. præparatorum,
Maſtiches,
Seminis Plantaginis,
Granorum Kermes,
Santali Rubri,
Terræ Lemniæ, &
Radicis Tormentillæ, an. ℥ ß.
Macis, ʒj.
Caryophyllorum, ϑj.

A Powder againſt Abortion.

℞. Oriental-Pearls prepar'd,
Shavings of Unicorns-horn, and
Ivory,
White Amber,
Red-Corral prepar'd,
Maſtick,
Seed of Plantain,
Grains of Kermes,
Red-Saunders,
Seal'd-Earth, and
Root of Tormentil, *an.* ℥ ß.
Mace, ʒj.
Cloves, ϑj.

Make all theſe into a powder according to Art, mixing therewith ſix Leaves of pure fine Gold. When the Patient takes it, ſweet'n it with an equal or double weight of Sugar.

This Powder has been giv'n to ſtrength'n the Infant in the Womb, and to prevent Women from crying out before their time.

It is to be tak'n faſting, in an Egg, in Broth or ſome Syrup or aſtringent Confection, and the uſe of it may be continu'd as occaſion requires. During which time it is neceſſary for Women that take it to keep their Bed. The doſe is from half a Scruple to a Scruple, to thoſe that are to continue the uſe of it. But half a dram or a whole dram may be giv'n to ſtrong Women, if there be occaſion, and when the danger is great. The ſame doſe may be giv'n againſt weakneſſes, and want of Retention in the Stomach; as alſo in caſe of Diarrheas, Dyſenteries, Lienteries, and other Diſeaſes that proceed from weakneſs of the Stomach. The Preparation is the ſame with the reſt.

Pulvis ad difficilem Partum.

℞. *Teſticulorum Equi in clibano, ex Arte ſiccatorum,*
Cinnamomi acutiſſimi,
Nucleorum Dactylorum,
Boracis,
Croci, &
Foliorum Sabinæ ſiccorum, an. ʒij.
Trochiſcorum de Myrrha, ʒj.
Make them into powder according to Art.

A Powder for Women in Child-birth.

℞. The Stones of a Horſe bak't in an Ov'n according to Art,
Sharp-biting Cinnamon,
Date-Kernels,
Borax,
Saffron, and
Leaves of Savine dry'd, *an.* ʒij.
Trochiſhes of Myrrh, ʒj.

Put

Put the Horſe's Stones into a Glaz'd-earth'n-pot with a Cover well-luted on, ſet the Pot in a Baker's Ov'n when the Bread is tak'n out, and let it ſtand till the Stones are ſo drie that they may be powder'd. Theſe Teſticles thus dry'd may be kept in a Box cloſe ſhut, to be made uſe of as occaſion requires: for they may be left out as well as the Trochiskes of Myrrh and the Savine, where the Perſons are too nice, or where there is not ſo much ſtrength requir'd in the Operation.

Pulvis Hyſtericus.	*A Hyſteric Powder.*	
℞. *Verrucarum ad genua Equorum enaſcentium Verno tempore avulſorum, aut ſponte procidentium,*	℞. The Warts that grow within-ſide of a Horſes Leg, cut away or falling off of themſelves in the Spring-time,	℥j.
Aſſæ Fœtidæ,	Aſſa-fetida,	
Cornu & Ungulæ Hirci, an.	Horn and Hoof of a Goat, *an.*	ʒj.

Reduce all theſe into a groſs powder. Caſt about a Scruple of this Powder upon live-coals, to ſit and receive the ſmoak into the parts affected, through a Tunnel.

This Powder is the moſt quick and certain Remedy that is againſt Suffocations of the *Matrix*.

Pulvis Jovialis Hyſtericus.	*Hyſteric Powder of* Jupiter.	
℞. *Magiſterii Jovis Anglici, aut Bezoardici ejuſdem,*	℞. Magiſterie of *Engliſh-Jupiter*, or Bezoardic of the ſame,	
Matris Perlarum, &	Mother of Pearl, and	
Coralli Rubri præparat. an.	Red-Coral prepar'd,	ʒj.
Olei ſtillatitii Succini rectificati,	Diſtill'd Oyl of Amber rectify'd,	℈j.

Reduce theſe into powder, and mixe them for your uſe.

This Powder cannot be too much commended, for the great help it gives againſt the moſt violent and moſt deſperate ſuffocations of the *Matrix*, and for preventing its return. The doſe is a Scruple in Hyſteric-water, in the height of the Fit: and it may be tak'n three mornings after, to prevent its return.

Look for the Preparation of Magiſterie and Bezoar of *Jupiter* in the third part of this *Pharmacopœa*.

Pulvis Sperniolæ Crollii.	*Powder of Frogs-Tedders, by* CROLLIUS.	
℞. *Myrrhæ electæ,*	℞. Choice Myrrh,	
Thuris maſculi, an,	Male-Frankincenſe, *an.*	℥ij.
Croci opt.	The beſt Saffron,	℥ß.

Gather the Sperm of Frogs in the Month of March, *three days before the new Moon, at what time the Sperm ſtinks leaſt, and is moſt proper to be diſtill'd. Diſtill it in* Balneo Mariæ *through a Glaſs-Alembic: Or rather at the ſame time gather a greater quantity of Frogs-Sperm, and put it into a traſparent Linnen-cloth; hang up the Bag and ſet a Veſſel for the liquor to drop into it. Put the Liquor into a Glaſs-bottle, and ſet it in the Sun to purifie, pouring out from time to time the liquor that is clear, and changing the Bottles, and putting the Liquor ſtill in the Sun till it be all perfectly clear. Then powder the Myrrh, Frankincenſe and Saffron very fine, put the Powders mix'd together into a Plate of glaſs or white Earth, and having moiſten'd them with the Frog-water, and reduc'd them to a paſte, ſpread them in the Plate cover'd with a clean Paper and drie them in the ſhade: when the paſte is drie, moiſt'n it again with the ſame Liquor, and drie it again, and repeat the ſame Preparation twenty or thirty times over; and the more the better. At laſt reduce the maſs into a very fine powder, and add to it three drams of Camphire powder'd with ſome few drops of Spirit of Wine: Keep this Powder in a Glaſs-bottle very well ſtopp'd.*

This

This Powder is an excellent Medicine to ſtop internal Hæmorraghia's; for the coldneſs of the Frog-water coagulates the Blood. It alſo ſtays Vomiting and Spitting of Blood, and Bleeding at the Noſe. It ſtops the progreſs of hot Gouts, and aſſwages their pain. It cools the Inflammation of Eriſipela's, applying it ſoak'd in Vinegar upon the part. In two hours it mortifies a Whitlow, much more if it be ſteep'd in the Sperm-water. It ſtays the Fluxes of Blood in Women, being tak'n in Plantain-water. The Water of Frogs-Sperm alone aſſwages of the Gout, mix'd with a little Alum. The Doſe of the Powder is from three to five Grains in proper Liquors.

Pulvis Dyſentericus.		*A Powder againſt the Dyſenterie.*	
℞. *Terræ Lemniæ,*		℞. Seal'd-Earth,	
Boli Armenæ,		Bole-Ammoniac,	
Roſarum Rubrarum,		Red-Roſes,	
Balauſtiorum,		Pomegranate-Flowers,	
Radicum Tormentillæ, & Biſtortæ,		Root of Tormentil, and Snake-weed,	
Lacrymarum Sanguinis Draconum,		Tears of Dragon's blood,	
Coralli Rubri præparati,		Red-Corral prepar'd,	
Lapidis Hæmatites, an.	℥j.	Blood-Stone, *an.*	℥j.
Seminum Portulacæ, Plantaginis, &		Seeds of Purſlane, Plantain,	
Sophiæ Chirurgorum, &	℥ß.	Flixe-wood,	
Caryophyllorum, an.		Cloves, and	
Macis, an.	℥ij.	Mace, *an.*	℥ij.

Reduce all theſe into powder according to Art.

This Powder is not only highly commended againſt the Dyſenterie, but againſt all defects of Retention in the Inteſtines and Stomach. The Doſe is from one Scruple to one dram, or two when giv'n to ſtrong Conſtitutions. It is giv'n in Wine, or in ſome aſtringent Water or Decoction. It may be alſo tak'n like a Bolus in ſome Syrup in an Egg, or ſome aſtringent Confection. For the Rich you may add ſix Grain of Ambergriſe, and half a Grain or a Grain of Laudanum, if you deſire more powerfully to ſtop the motion and acrimonie of the Humours: It may be tak'n oft'n, if occaſion requires, but ſtill faſting.

There are ſome that beat Rye-flower in a Mortar, with Juice of ripe Elder-berries, and make a Cake of it, which they drie in an Ov'n and reduce to powder, the uſe whereof is much the ſame with this Dyſenteric-powder.

Pulvis contra Hæmorrhagiam.		*A Powder againſt a violent Flux of Blood.*	
℞. *Lapidis Hæmatitis,*		℞. Blood-Stone,	
Nuclei Lapidis Ætitis,		Kernel of the Eagle-ſtone,	
Terræ Vitrioli, poſt diſtillationem remanentis, lotæ,		Earth of Vitriol that remains after diſtillation, waſht,	
Boli Armenæ,		Bole-Armonac,	
Thuris maſculi,		Male-Frankincenſe,	
Caudæ Equinæ,		Smooth-leav'd Horſe-tail, or Joynted-Ruſhes,	
Centinodiæ,		Knot-graſs,	
Terræ Lemniæ,		Seal'd-Earth,	
Cornu Cervi uſti, &		Hart's-Horn burnt,	
Gypſi, ana.	*partes æquales.*	Parget, *ana.*	equal parts.

Reduce all theſe into a powder for uſe.

This Powder is not to be tak'n inwardly. However it failes not to ſtop the blood of Wounds, Veins or Arteries apply'd alone, or incorporated with the white of an Egg or Vinegar, being bound upon the place with a Fillet. It ſtops Defluxions upon the Eyes, being

being steept in the white of an Egg or Vinegar, and apply'd to the Temples. This Powder deserves to be prepar'd, and to be kept always in readiness upon all unexpected occasions.

Pulvis Diatragacanthi Frigidi, Correctus.		*The Corrected Powder of Cold-Diatragacanth.*	
℞. *Gummi Tragacanthi electi,*	℥ ij.	℞. Choice Gum-Tragacanth,	℥ ij.
Arabici opt.	℥ x.	*Arabick* the best,	℥ x.
Glycyrrhizæ, &		Liquorice, and	
Amyli, an.	℥ ß.	Flower of Wheat, *an.*	℥ ß.
Seminis Papaveris alb.	℥ iij.	Seed of white Poppy,	℥ iij.
Quat. frigid maj. mund. an.	℥ j.	Four greater cold cleans'd, *an.*	℥ j.

Pulverize the Gums in a large Braß-mortar heated, as well as the Pestle, in such a quantity that you may be sure to have the Dose prescrib'd when they come to be sifted. Bruise one part of the Seeds with the Liquorice, another with the Amydon, another with the Gums, after they have been sifted; by which means you shall re-sift the whole Powder again with the Seeds.

We find in other Receipts of this Powder three ounces of Penidiate, more Cold-Seeds by half, as also Camphire, which are all left out. They that know that Sugar boyl'd in Pennets and mix'd in Powders, presently causes their putrefaction, and that it reduces the powder to a kind of paste, cannot think it amiss to leave it out: besides that its vertue is not considerable, and for that this Powder is never us'd but mix'd with Sugar, or with Compositions mix'd with Sugar. Nor can they disapprove the abatement of some part of the Cold-Seeds, to prevent it from rendring the Powder greasie and clammy. Especially considering that if you design to keep the powder, 'tis better not to put the Seeds in at all till you are just going to use it.

This Powder stops Defluxions from the Brain upon the Brest, thick'ns the thin humours, smooths the roughness of the *Aspera Arteria* and the Lungs, and is of great use in all Diseases of the Brest. You may make Tablets thereof by adding an ounce and a half or two ounces of this Powder to a pound of Sugar boyl'd to a solid Electuary. It is also mix'd in some sort in Looches to remove in some measure the sharpness of Laxatives. It is never giv'n alone, and therefore it is needless to limit the Dose, which must be regulated by that of the Compositions wherewith it is to be mix'd.

If you would make this Powder more detersive, and more effectual to unloosen flegm and facilitate expectoration; add to it the double of its weight of Orrice finely-pow-der'd; and by adding as much Sugar-candy powder'd as there is Gum-Tragacanth, you have the Simple-powder of Diaireos. Remember however that it is not good to put Sugar in Powders till you are ready to make use of them.

Pulvis Sternutatorius.		*A Sneezing-Powder.*	
℞. *Foliorum Marjoranæ siccorum,*		℞. Flowers of Marjoram dry'd,	
Salviæ,		Sage,	
Betonicæ,		Betonie,	
Florum Lilii Convallium, an.	℥ j.	Flowers of the Lilly of the Vally, *an.*	℥ j.
Radicum Ireos Florentiæ,		Roots of *Florence*-Orrice,	
Ellebori albi,		White Ellebore,	
Pyrethri,		Pellitory of *Spain,*	
Seminis Nigellæ Romanæ, an.	℥ ij.	Seeds of *Roman*-Nigella, *an.*	℥ ij.
Summitat. Pulegii Regalis, &		Tops of Penny-royal, and	
Serpilli, an.	℥ j.	Mother of Thyme, *an.*	℥ j.

Make a Powder according to Art.

This Sneezing-powder produces good effects in Apoplexies, Epilepsies, Lethargies, and other Diseases of the Brain that proceed from a cold cause: For it op'ns the passages for the cold humours that besieg'd it, excites and enliv'ns the Natural-heat, and enables the parts to expel superfluities, that hinder'd them from performing their ordinary functions.

In extraordinary drowſineſſes and ſleepy-Lethargies, two drams of Euphorbium may be added to the Compoſition of this Powder. But not unleſs there be very great neceſſity, for fear the extraordinary operation of the Euphorbium cauſe ſo violent a defluxion of Rhume as will be difficult afterwards to ſtop.

Pulvis Cornachinus.		*The Cornachine-Powder.*	
℞. *Scammonii puriſſimi ſulphurati,*	℥ ij.	℞. The pureſt Scammony ſulphurated,	℥ ij.
Antimonii Diaphoretici,	℥ j ß.	Diaphoretic-Antimony,	℥ j ß.
Cremoris Tartari,	℥ ß.	Creme of Tartar,	℥ ß.

Reduce them all into a fine powder for uſe.

This Powder was call'd *Cornachine*, by reaſon that *Cornachinus* a *Phyſician* of *Piſa* was the Inventor, and has made a great Commentary upon it. The wonderful effects of it have been the reaſon that ſome Perſons have attempted to alter the Compoſition by adding or abating. For ſome, inſtead of preparing Scammonie with the vapour of Sulphur, imbibe it ſeveral times in Tincture of Roſes ſharpen'd with Spirit of Wine or Spirit of Sulphur, reduce it into a paſte with Oyl of ſweet Almonds, and diſſolve the Creme of Tartar in a Decoction of Mechoacan, and chryſtallize it to put it into this Powder. But not to find fault with their good Intentions, this I can be bold to ſay, That upon an infinite company of Tryals I have made, I dare affirm that this Powder prepar'd as here preſcrib'd, failes not to anſwer full expectation. And therefore 'tis a vain thing to keep ſuch a ſtir about the preparation of Scammonie; it being enough to ſpread it upon a piece of paper, and hold it over a little burning Sulphur. Which done, do but prepare the Powder right and obſerve the Doſes, and you need not fear the working.

Some call it *The Earl of Warwick's Powder*; others *Antimony-diagridiated*; others *Powder of Three.*

This Powder operates, quickly, ſafely and pleaſingly. It gently purges ſuperfluous Humours from the Bowels, and roots up the cauſe and matter of Agues, and many other tedious Diſeaſes. The Doſe is from half an ſcruple to half a dram, and ſometimes to a whole dram. It is to be tak'n in a morning faſting, in white Wine, in Broth, or ſome Hepatic-decoction. It may alſo be tak'n in the Yolk of an Egg, in a little Syrup, or in ſome Confection.

Pulvis Nephriticus.		*A Nephritic-Powder.*	
℞. *Oculorum Cancrorum Fluviatilium,*		℞. River-Crabs Eyes,	
Oſſium petreorum Percarum, &		Stony-bones in the heads of Perches, and	
Aſellorum minorum,		Leſſer Whitings,	
Millipedarum ſiccarum,		Dry'd Cheſlops,	
Sanguinis Hirci præparati, &		Goats-blood prepar'd,	
Seminis Milii Solis, an.	℥ j.	Seeds of Gromel, *an.*	℥ j

Grind the Crabs-Eyes and Fiſh-bones upon Porphyrie, moiſt'ning them with Turnip-water, obſerving the preparation of Precious-Stones. Take the Blood of a young Goat bred upon the Mountains, and there having fed upon Aromatic-herbs, drie the Blood in the Sun, ſpread upon Plates, till it be fit to be pulveriz'd with the Cheſlops and Gromel-ſeed. Then ſifting all the Powders together, the powder is finiſh'd.

The Ingredients of this Powder are very diuretic: the principal vertue whereof conſiſts in the volatile-ſalts wherewith they abound. And it is obſervable that there is nothing acid in the whole Compoſition. For the mixture of acids among fix'd or volatile Salts many times does but increaſe the Stone, by reaſon that by their proportional conjunction the Stones are form'd in the Body: ſo that there is nothing but the predominancy of the volatile or fix'd Salt above the acid, or of the acid above the fix'd or volatile Salts that oppoſe the growing of the Stone in the Body, or diſſolve them when they are come to a Subſtance. The Doſe of this Powder is from a ſcruple to half a dram. It is tak'n uſually in white-Wine; and the uſe of it may be continu'd as occaſion requires.

They

They that will be careful to prepare this Powder, need not care for that which goes in most Dispensatories under the Name of *Lithontripon*, or *Lithontripticon*, which is only a numerous collection of Medicaments much differing in quality, some of which are more proper to coagulate and shut up, then to dissolve and op'n.

CHAP. XX.

Of Opiates, Electuaries, and Confections.

THE Name of Opiate, by right, ought not to be giv'n but to soft Compositions, where *Opium* is an Ingredient. But many times Confections, Antidotes, and Electuaries are comprehended under that Name; so that there are some Compositions call'd Opiates, wherein there is no *Opium* at all; as well as the Names of Electuaries, Antidotes and Confections, to Compositions where *Opium* is mix'd. But not to examine the Liberties which the Writers have tak'n, I will only say, That Opiates, Confections, Antidotes and Electuaries, are internal Remedies variously compos'd of Pulps, Powders, Liquors, Sugar, and Honey, and most frequently reduc'd to a soft consistency to be put up close in Pots for use. Only solid Electuaries are to be excepted, of some of which I have spok'n in the Chapter of *Tablets*, having reserv'd the rest to be here inserted among Purgative-Electuaries.

It is a difficult thing to prescribe any just proportion for the Pulps, Powders, Sugar, or Honey, which must compose these Opiates and Electuaries; or to give a general Rule for the quantity of Liquor necessary to suck up the vertue of divers Medicaments, boyl'd or infus'd therein; as for the boyling of the Sugar or Honey; in regard the quantity of the one or the other may be augmented or abated, according to the nature of the Ingredients, the purpose of the *Physician*, and the Palate and constitution of the Patient. For though the most usual proportion for Opiates, soft and solid Electuaries Laxative, be about three ounces of Powder to a pound of Sugar, or Honey, and an ounce and a half or two ounces of Powder for Confections, or solid Cordial-Electuaries; this proportion is not always to be observ'd. For regard is oft'n-times to be had to the price, scarcity or nature of the Ingredients of the Powder, or the quantity or thickness of the Pulps which are to be made use of in the stead of Sugar or Honey, to the palate and constitution of the Patient, to the hardness of the Composition, or the easiness or difficulty to give them their due consistence; or to the making the Composition more purgative or Laxative. Wherein there is a great exactness to be observ'd, especially in the Doses of Laxatives and Narcoticques. For therein you must observe to a grain the quantity of Powder which an ounce of Electuary can contain. To which purpose the *Apothecary* must be very careful justly to weigh every thing, and to make a true mixture, so that all the parts of the Composition may equally partake of the Powder and the Ingredients that compose it. Which general Rule may suffice to those who will take the pains to observe my Method in the particular Preparation of these sorts of Compositions, whereby they will find the reasons wherefore the proportions are not always to be the same.

Theriaca Andromachi Senioris.		*The Treacle of* Andromachus *the Elder.*	
℞. *Trochiscorum Scilliticorum,*	℥ *xij.*	℞. Trochishes of Squils,	℥ xij.
Viperinorum,		Of Vipers,	
Magmatis Hedychroi,		The Dregs of *Hedychroum,*	
Piperis longi,		Long-Pepper,	
Opii Thebaici, an.	℥ *vj.*	*Theban*-Opium, *an.*	℥ vj.
Rosarum Rubrarum,		Red-Roses,	
Succi Glycyrrhizæ,		Juice of Liquorice,	
Seminis Buniadis,		Seed of wild Navew,	
Scordii,		Scordium,	
Opobalsomi,		Opobalsamum,	

Cinnamomi & Agarici, an.	℥ iij.	Cinnamon and Agaric, *an.*	℥ iij.
Coſti,		Coſtus,	
Nardi Indicæ,		*Indian*-Spikenard,	
Dictamni Cretici,		*Cretan*-Dittany,	
Rhapontici,		Rhaponticum,	
Radicis Pentaphylli,		Roots of Cinqfoyle,	
Zinziberis,		Ginger,	
Praſſij Albi,		White-Hore-hound,	
Stoechadis Arabicæ,		*Arabian*-Caſſidonie,	
Schoenanthi,		Sweet-Ruſh,	
Seminis Petroſelini Macedonici,		Seed of *Macedonian* Stone-Parſly,	
Calaminthæ Montanæ,		Mountain Calamint,	
Caſſiæ Lignea,		Caſſia-Wood,	
Croci,		Saffron,	
Piperis Albi,		White Pepper,	
Nigri,		Black,	
Myrrhæ Trogloditidis,		Ethyopic-Myrrh,	
Thuris Maſculi,		Male-Frankincenſe,	
Terebinthinæ Chiæ, an.	℥ j ß.	Turpentine of *Chio, an.*	℥ j ß.
Radicum Gentianæ		Roots of Gentian,	
Acori veri,		True ſweet-ſmelling Flag,	
Meu Athamantici,		*Athamantic*-Spignel,	
Valerianæ majoris,		Bigger Valerian,	
Nardi Celticæ,		*Celtic*-Spikenard,	
Amomi Racemoſi,		Amomum with Cluſters,	
Chamæpityos,		Ground Pine,	
Comæ Hyperici,		Hair of St. *John*'s-wort,	
Seminis Ameos,		Seeds of Biſhops-weed,	
Thlaſpeos,		Treacle-Muſtard,	
Aniſi,		Aniſe,	
Fœniculi,		Fennel,	
Seſeleos Maſſilienſis,		Hartwort of *Marſeilles,*	
Cardamomi minoris,		Leſſer Cardamom,	
Malabathri,		*Indian*-Leaf,	
Comæ Polii montani,		Hair of Mountain-Poley,	
Chamædryos,		Germander,	
Carpobalſami,		Berries of the Balſom-Tree,	
Succi Hypociſtidos,		Juices of the Excreſcence of Ciſtus,	
Acaciæ veræ,		Of true Acacia,	
Gummi Arabici,		Gum-*Arabick,*	
Styracis Calamitæ,		Mountain-Calamint,	
Terræ Lemniæ,		*Lemnian*-Earth,	
Chalcitidis,		Chalcitis,	
Sagapæni, an.	℥ j.	Sagapenum, *an.*	℥ j.
Radicum Ariſtolochiæ tenuis,		Roots of thin Birthwort,	
Comæ Centaurii minoris,		Hair of the Leſſer Centaurie,	
Seminis Dauci Cretici,		Seed of *Cretan*-Wild-Carrot,	
Opopanacis,		Opoponax,	
Galbani,		Galbanum,	
Bituminis Judaici,		Bitumen of *Judea,*	
Caſtorei, an.	℥ ß.	Caſtoreum, *an.*	℥ ß.
Mellis opt. deſpumati,	℔ *xxviij.*	The beſt clarify'd Honey,	℔ xxviij.
Vini Generoſi,	*q.ſ.*	Strong Wine,	*q.ſ.*

I have here inſerted this Receipt of the Treacle of *Andromachus* the Father, not only in reverence to Antiquity; but becauſe I am verily perſwaded that if care be tak'n rightly to chooſe all the Ingredients that compound it, and to make a more methodical Preparation then the Ancients did, that the Medicine may prove of great vertue.

I have deliver'd my thoughts upon this particular Receipt in the Treatiſe of *Treacle*, which I have printed at *Paris* in the Year 1668. whither I might refer the *Reader*. But to ſpare him that pains, I will here epitomiſe in a few words the Obſervations which I there made upon this *Treacle*. Methinks that in the Preparation of Trochiskes of Squils he has

has done very well to imitate *Zwelfer*, to make use of the Root of white-Dittany pulveriz'd instead of the Vetches, in regard that all Physic acknowledges the Cordial vertue of this Root, and that it is very proper to make the Squills fit for Trochiskes. Whereas the Vetches are of a very gross substance, have no Cordial-vertue, and are seldom us'd but in Cataplasmes; and never in any other internal Remedies then Trochiskes.

In the second place I am absolutely constrain'd to disallow of the ancient preparation of Trochiskes of Vipers, which was prescrib'd in that manner, because they had then no true knowledge of the Nature of Vipers, nor of their Venome, and because that the Havock which *Hannibal*'s Vipers made in the Roman Ships, gave them occasion to think, very impertinently, that all the parts of the Vipers were venomous, and that it was impossible for them to have their Cordial and poyson-resisting vertue, without overcoming by some Preparation that ill imagin'd-Venome, and of which they were so afraid in their ridiculous preparation of the viperine salt. And this was that which oblig'd them to whip them, before they cut off their Heads, and their Tails, and not to make any use at all of their Hearts, and their Livers; as also to boyl the Trunks flea'd, and quite dis-embowel'd in Water with Salt and Dill, till the flesh came from the Bone; and to mix the same flesh, so boyl'd, with a fift part of Bisket-bread powder'd, to make Trochiskes: Not considering that the provocation of the Vipers by whipping could not but alter and deprave all the parts of their bodies, so far it was, from sending to the Head, as they pretended, a Venome which is not to be found in any part of the body, when the Viper is dead, nor when it is living neither, nor of which you can observe any ill effect, if she be not provok'd when she bites. Neither had they consider'd that the Heart and the Liver have as much vertue as the flesh,, or that the addition of Salt and Dill, are no way necessary; in regard the flesh of those Animals have no Venome; that they only serv'd to make an impression of heat and Acrimony; and that the Salt was opposite to their precepts of making choice of the breeding-place of the Viper, directing that no use should be made of those that bred upon the Sea-shore, by reason of the Salt things upon which they fed. Nor did they observe that they could not boyl Vipers in Water, till the flesh came from the bone, but that all the best part of their Juice and vertue must go into the Broth, as they might have seen by boyling their ordinary food. And lastly, they did not foresee that the Addition of a fift part of the Bisket-bread powder'd, void of any vertue, could not but be a burthen to the Viper's flesh, which was already depriv'd of its best parts; and that that quantity of Bread made up a moyety of the substance and weight of the Trochiskes when they were dry.

They who would not fall into these errours, and who in some measure to be conformable to *Andromachus*, would prepare Trochiskes, must not forget to make use of the Hearts and Livers of the Vipers, with their bodies dry'd in the shade, and reduc'd into fine powder. Let them then make a paste, somewhat solid, of this powder, with Malmsey, wherein they have dissolv'd never so little Gum-Arabic powder'd, and make it into flat, thin Trochiskes, which they must dry in the shade, and afterwards anoint with Balsom of *Peru*, as well for their preservation, as to give them a fragrancy.

If any object, that *Andromachus* never knew that the Vipers-bone was us'd in Trochiskes; I answer, that if he had perfectly well known the parts of which they are compos'd; or if he had understood as I do, that there is both a volatile salt and oyl in the bone, and that more plentiful then in the flesh, he would not have omitted the use of them, and never have crumm'd his Bread into Trochiskes. I am perswaded also, that if he were now alive; if he had been present at all the truths which I have discover'd, and had been convinc'd of the truth of the reasons which I have deliver'd in my Book of Experiences upon the Viper, he would infallibly have forsaken his own preparation, and have adher'd to mine, and caus'd them to change their opinion, who innocently lead him into a mistake.

In the third place, forasmuch as most of the Ingredients that make up the composition of Trochishes of *Hedychroum*, are also us'd in the composition of Treacle; and for that these drugs cannot be beaten apart, nor the Trochiskes be made and dryed in the Air, without a great loss of their weight, as also of their vertue, considering also after all this, that the same Trochiskes are to be powder'd themselves among other Medicaments of the Treacle; It may not be amiss to let the making of Trochiskes alone, dispensing the proportion of Drugs requir'd for their composition, among the Ingredients prescrib'd for the composition of the Treacle; and so to powder the whole together, as things appointed for one and the same composition.

In

In the fourth place I cannot allow the opinion of the Ancients in the mixture of the Medicaments of the Treacle, whereby they direct the dissolving the Gums in Wine, to strain them through a cloth, and to boyl them afterwards to a consistency somewhat thick, to mix them afterwards in the composition; since there are several good reasons opposite to that Method. 1. Because there is no necessity to dissolve and strain the Gums which should be pure. 2. Because we cannot dissolve them in Wine, strain them, and boyl them to that consistency which they direct, without a great dissipation of the volatile parts whereof they plentifully consist, and wherein lyes their principal vertue. 3. Because by that means the spiritous part of the Wine dissipates, and the watry and Terrestrial part only remains. 4. Because that after the dissolution and straining of the Gums, though you may have augmented the weight, yet it is impossible regularly to observe the dose which the Author hath prescrib'd. And lastly, because that after you have put in the Gums very pure, by beating them among other Medicaments, the Powder becomes much better, by reason the viscous parts of the Gums stick to the light and dry parts of the other Ingredients of the Powder, which otherwise would be subject to dissipate, and by this means unless the Powder be too fatty, it beats better, and is made with less wast of its quantity and vertues.

As for the *Opium*, had it we in Tears that were pure, such as distills from the heads of the Poppy in the Country of *Thebes*, and such as *Andromachus* might have had in his time, it would be enough to beat it among other Ingredients, like the Gums in Tears. But by reason of the impurity of that which is brought to us, it is very proper to prepare it in extract, according to the method which I shall prescribe when I come to speak of extracts; and to dissolve these Extracts in a little Wine, like that of Liquorice, and the Juices of *Acacia*, or the undergrowth of *Cistus*, as also *Chalcitis*, or the Stone that tryes Brass, and to strain through a Cloth these Extracts or Juices dissolv'd, to separate and cast off the impurities, to the end they may be mingl'd afterwards in the whole mass of the Treacle.

In the fifth place, I see nothing that should oblige us to imitate the Ancients in the despumation of Honey, by adding Wine to it; as well to prevent the spiritous part from flying away in the Ebullitions necessary for the despumation, and to the end the grosser part of the Wine may not remain among the Honey; as for that it is impossible that the Honey should be kept so long upon the fire, till the forreign moisture be consum'd, without a remarkable dissipation of its Aromatic parts, which are not the least. And for as much as we never put into Treacle any Honey but what is perfectly fine, I can find nothing more proper then to allow it a small Ebullition without any Addition, and after it is taken off the fire and cool, to scum it, and strain it through a hair-sieve. In regard that little boyling is sufficient to put it into a condition to suck up about two pints of Wine, which are enough for the dissolution of the Juices prescrib'd for this quantity of Treacle, aud to give all the Ingredients mix'd and united together, the consistency of an Opiate.

As for the *Opo-Balsamum*, or the Oyl of Nutmegs, which may be us'd in its stead; one part of the one or the other may be very properly mix'd with the dry Medicaments, when you make the powder without any fear that it should be too fatty. The surplusage must be incorporated with the Turpentine.

The Trochiskes of Squills must be beaten among the rest of the Ingredients, which are to be pulveriz'd. The Saffron dry'd in a Stove, or by a moderate fire, may be beaten apart or with the rest of the Ingredients.

The Extracts being made and dissolv'd in wine, as also the Juices and the Powder being ready, the Turpentine must be melted with the *Opo-Balsamum*, or the Oyl of Nutmegs, in *Balneo Mariæ*, or over a very moderate fire. Fill three or four pints of Honey, scum'd and warm'd, into a large bason, mix therewith the Powder'd Saffron, if it were beaten apart; if not, mix therewith some part of the Powder, stirring the whole with a large woodd'n-Spatula; then add some pints of warm Honey; and after that put in some part of the dissolv'd Extracts and Juices, and continue adding successively, sometimes the Powder, sometimes the Honey, and sometimes the dissolv'd Juices and Extracts, till the mixture of all things be perfectly compleated. After that, mix the Turpentine, and the rest of the *Opo-Balsamum* or Oyl of Nutmegs incorporated: Stir the whole as long as you can, till the union and mixture of the whole be perfectly compleated.

When the composition is quite cold, put it up into an Earth'n-Vessel glaz'd within, a third part larger then to contain the quantity of the Treacle, that it may have sufficient room to swell, which the Treacle will do during Fermentation, which you may

hasten

haſten by putting the Veſſel into a warm place. Stir the Treacle with a woodd'n Spatula twice a week, about a quarter of an hour together every time, for the two firſt months, and repeat the ſame ſtirring once a Week for the next four months; which make in all ſix months; the time which all Writers judge neceſſary for the Fermentation of this Treacle. By this means you ſhall not only make a perfect Union of the ſubſtances, but alſo of the vertues of all the Medicaments, and then you may ſafely make uſe of this Treacle.

The conſiderable quantity of *Opium* in this compoſition, is the reaſon that it ſenſibly ſhews its Anodyne, or pain-eaſing, thickning, ſoporiferous qualities, eſpecially when it is new, though the force of the other Medicaments is not diminiſh'd, which ſerves as a curb to its operation. Treacle being compos'd of a great quantity of hot Medicaments, ought to be very much eſteem'd for the cure of cold Diſeaſes, and of all thoſe where the Natural heat is feeble and languiſhing, eſpecially among the reſt, of Palſies, Epilepſies, Convulſions, and all cold Diſeaſes of the Head. It is proper againſt all Weakneſſes, and want of retention in the Stomach, and Inteſtines; againſt the Diarrhea, Dyſentery, Lientery, *Morbus Cholera*, and all ſort of Cholicks; againſt Agues, and particularly the Quartan; againſt the Worms, againſt all ſorts of poyſon, the Peſtilence, Small Pox, the Meaſles, and all Epidemic Diſeaſes; againſt the biting of mad-dogs, and all ſorts of Venemous Animals; againſt want of ſleep, and griping pains in Children; againſt Hyſteric-paſſions, the Jaundies, and an infinite ſort of other Diſeaſes.

It is tak'n in Bolus, and you may drink a little Wine after it if you pleaſe, or elſe diſſolve it in Wine, or in Cordial-water. The Doſe of it for Children, is from one grain to three or four, and ſometimes ſix: For grown people, from a ſcruple to a dram; and two drams for ſtrong conſtitutions, and upon urgent occaſions. It may be laid upon the Stomach or Heart, like an Emplaiſter, or Epitheme, as well to ſtrengthen, as to reſiſt any malignity, and to kill Worms. It is alſo to be laid upon Carbuncles, and Buboes Peſtilential or Venereal. It is alſo to be mix'd with Spirit of Wine, and with Oyls and Oyntments, to be laid to the Chine of the Back, and upon the weaken'd parts. It is alſo laid to the wriſts, and ſoles of the Feet in the fits of intermitting Agues, and particularly the Quartan. It is mingl'd in Opiates, and in divers potions. It is giv'n as an infallible remedy to hinder the too great effect of purgative Medicines, and all ſorts of ſuperpurgations.

But becauſe the mixture of ſo many ſeveral Ingredients in one only compoſition, has for a long time diſpleas'd many Perſons who are able to judge; and for that they have believ'd with good reaſon, that there might be a Treacle compos'd of fewer drugs, and more effectual then that of the Ancients. And for that I am well inform'd that ſeveral Phyſicians, but more eſpecially Apothecaries, have earneſtly wiſh'd that ſuch a one might be invented and publiſh'd; Monſieur *D'Aquin* the King's chief Phyſician has been pleas'd to give me the Receipt of a Treacle order'd according to his own way, to impart on his behalf to publick view; wherein you ſhall find Medicaments, not only well-dos'd, and well-proportion'd, but alſo admirably well-choſen, and which will certainly work all the good effects which can be expected from an excellent Treacle, provided you take care to have ſound and good Ingredients, and prepare them well, and obſerve the method which *I* ſhall ſet down.

Theriaca Reformat D. D. *D'AQUIN.*

℞. *Truncorum, Cordum, & Hepatum Viperinorum ſiccorum,* ℥ *xxiv.*
Trochiſcorum Scilliticorum,
Extracti Opii Thebaici, an. ℥ *xij.*
Radicum Contra-yervæ,
Viperinæ Virginianæ,
Angelicæ,
Valerianæ majoris,
Meu Athamantici,
Gentianæ,
Ariſtolochiæ tenuis,
Coſti,

A Reform'd Treacle of Monſieur D'AQUIN.

℞. The Bodies, Hearts, and Livers of Vipers dry'd, ℥ xxiv.
Trochiskes of Squills,
Extract of *Theban-Opium, an.* ℥ xij.
Roots of Spaniſh Counter-poyſon,
Virginian Vipers-graſs,
Angelica,
The greater Valerian,
Cretan Spignell,
Gentian,
Slender Birthwort,
Coſtus,

Nardi

Nardi Indicæ,	*Indian*-Spikenard,
Nardi Celticæ,	*Celtic*-Spikenard,
Cinnamomi,	Cinamon,
Olei Nucis Moſcatæ per expreſſionem Extracti,	Oyl of Nutmegs preſt,
Croci,	Saffron,
Dictamni Cretici,	Cretan-Dittany,
Folii Indi,	Indian-Leaf,
Scordii,	Water-Germander,
Calaminthæ Montanæ,	Mountain-Calamint,
Polii Montani lutei,	Yellow Mountain-Poley,
Chamæpityos,	Grand Pine,
Comarum Centaurii minoris & Hyperici,	Hair of the Leſſer Centaury, and St. *John*'s-wort,
Florum Stoechadis Arabicæ,	Flowers of Arabian Caſſidony,
Granorum Amomi Racemoſi, & Cardamomi minoris,	Berries of Amomum, and Leſſer Cardamoms,
Seminis Petroſelini Macedonici,	*Macedonian* Stone-Parſley,
Ameos,	Biſhops-weed,
Seſeleos Maſſilienſis,	Seſeli of *Maſſilia,*
Myrrhæ Troglodytidis, an. ℥ viij.	*Æthiopian* Myrrh, *an.* ℥ viij.
Reſinæ Styracis electæ puriſſimæ,	The pureſt Roſin of Storax,
Opopanacis,	Opopanax,
Sagapeni,	Sagapen,
Caſtorei, an. ℥ iv.	Caſtoreum, *an.* ℥ iv.
Extracti Mellaginei Granorum Juniperi, ℔ *lxxij* ß.	Mellaginous Extract of Juniper-berries, ℔ lxxij ß.
Vini Malvatici, ℔ *j* ß.	Malmſey-wine, ℔ j ß.

There is no need of preparing Trochiskes of Vipers for this Treacle, it being enough to hang up the Bodies, Hearts, and Livers of the Vipers, to dry in the op'n Air out of the Sun, and to take the weight preſcrib'd. The Trochiskes of Squills are prepar'd with the Powder of the Root of White-Dittany, as I ſhall ſhew in the Chapter of Trochiskes. Draw the Extract of *Opium* according to the method which I ſhall give in the Chapter of Extracts in the Third Part of this *Pharmacopœa*, and reduce it into an indifferent ſolid conſiſtence.

The Root of *Contra-yerva*, or *Spaniſh*-Counter-poyſon, grows in *Charcis* a Province of *Peru*. It is ſmaller then that of Orrice, reddiſh without, white within, knotty and fibrous. The ſmell is like that of Figg-leaves. The word which ſignifies in *Spaniſh*, *Counter-poyſon*, comes from the *Spaniſh Yerva*, by which name the *Spaniards* call white-Hellebore, with the Juice whereof the *Spaniſh* Huntſmen are wont to poyſon their Arrows in the Countrey where the *Contra-yerva* grows. The taſt of the Root is Aromatic, accompany'd with a kind of Acrimony.

The *Virginian* Vipers-graſs, is a kind of *Contra-yerva*, which grows in that part of *Virginy* poſſeſs'd by the *Spaniards* in the Northern Tract of *America*; it is very Aromatic, and much eſteem'd in *England* againſt Poyſons, and all ſorts of Venomes. For which reaſon it is added to the Root of *Contra-yerva* of *Peru*, in the Counteſs of *Kent's* Powder, to which theſe two Roots do give its principal vertue.

What I have already ſaid of the Roots of Angelica, Spignel and Gentian, ſpeaking of Theriacal Vinegar, needs no repetition.

I cannot change my opinion as to what I have already ſaid of ſlender Birthwort, in my Diſcourſe upon Treacle. And ſay moreover, that for this, or the Treacle of *Andromachus*, you are to uſe no other Birthwort, then that which by Writers is call'd *Piſtolochia*, *Polyrrhizon*, or the buſhy-rooted Birthwort, becauſe it is of a ſlenderer ſubſtance then all the reſt, and in particular more abounding in vertue, then the *Clematitis*, or *Spaniſh* climbing Birthwort, which *Matthiolus*, and ſome others, his followers take for the ſlender Birthwort.

For it is not enough, that *Dioſcorides*, *Matthiolus*, and *Theophraſtus*, knew but three ſorts of Birthwort, the long, the round, and the *Clematitis*: That the *Clematitis* has a ſlenderer Root then any of the three; That *Matthiolus* believ'd that it was to be made uſe of in the Treacle before the long or the round, and that it has in ſome places been put

put into the Treacle instead of the slender Birthwort; it ought also to have been inquir'd whether there were no other sort of Birthwort in *Europe*; whether the *Clematitis*, had any other more evident marks of slenderness, then all the other Birthworts; and whether it surpass'd them in vertues, that we might certainly know it to be that to which *Andromachus* has giv'n the name of slender? Then it might have been seen that there are several other sorts of Birthwort, besides the three of *Dioscorides*, *Matthiolus*, and *Theophrastus*, and the *Clematitis* which *Matthiolus*, and some others take for the slender Birthwort: that instead of being slenderer then the rest, the stalks thereof are thicker and higher; the Leaves, Flowers and Fruits, larger and bigger, and the Roots much longer then those of all the other sorts of Birthwort, and in particular much bigger then those of *Pistolochia* or *Polyrrhizon*, or bushy-rooted Birthwort, of which all the parts are much more slender, then that of *Clematitis*, and all the other sorts. It might have been observ'd that the bushy-rooted Birthwort, which I have made choice of, has a taste, smell, and colour, both External and Internal, much more like to those of the long and round Birthwort, then to that of the *Clematitis*; which on the contrary differs much from the rest, especially in taste and smell. As for the vertues, though that *Matthiolus* believ'd that it was to be made use of in the Treacle, for the slender Birthwort, in regard the *Clematitis* was the most slender that he knew, you shall find nothing in better Authors to support his opinion; On the contrary, you shall find, that the *Clematitis* is inferiour to the bushy-rooted Birthwort in vertue.

We shall find in *Dioscorides*, upon whom *Matthiolus* grounds his writings, that after he has extoll'd the vertues of the long and round Birthwort, at last, says he, *Clematitis is thought to have the same effects, but it is inferiour in vertue.* But he does not say, as his Commentator does, that it is to be put into the Treacle. We shall find that *Ruellius*, after he had extoll'd the vertues of the Birthworts, and above all, those of the bushy-rooted, concludes in these words: That which is call'd *Clematitis is thought to work the same effects, but more slowly.* We may find in *Daleschamp*, that *Clematitis* is proper for the same uses that all the other Birthworts are, but that it is inferiour in vertue. And the same Authour citing *Galen*, where he speaks of Birthworts, saith, that the *Clematitis* is much more odoriferous, for which reason it is us'd in fragrant Oyntments; but that in Physic the Operation is less effectual then that of the rest. And the same Authour, quoting *Ægineta*, puts *Clematitis* among the Medicaments that evacuate Choler, which is no effect expected from the vertues that Treacle ought to have. You shall meet with *Clusius* also citing the same *Galen* to the disadvantage of *Clematitis*; as also *Bauhinus*, speaking by the mouth of *Dioscorides*, and saying, *Clematitis is thought to do the same, but it is inferiour to the forementioned in vertue.* And the same *Bauhinus* urging *Galen*, thus says; *That which is call'd* Clematitis *is more fragrant, therefore it is us'd in Oyntments,* but in Physic it is much weaker. You may find in *Lobel*, the same Citations of *Dioscorides* and *Galen*, to the decrying of the *Clematitis.* In particular he speaks thus,

Polyrrhiza Aristolochia, &c. *The Roots of bushy-rooted Birthwort, not mention'd by* Dioscorides, *and unknown to his Commentator,* Rondeletius *brought into use, utterly neglected through ignorance of the Plant, and yet to be preferr'd before the other two, as well for its pleasing Acrimony, as for its more effectual operation in Physic, and therefore by* Andromachus *and* Galen, *recommended as more fit for Treacle; For he that observes the tast and savour shall find the* Clematitis, *much more ineffectual, which the Latins took to be the slender Birthwort, mention'd by the ancient Writers of Treacle.* Afterwards you shall find him thus discoursing. *Not less known, nor less common is the* Clematitis, *which grows of it self in the cold Fields and Vineyards in the other parts of* France, *in all* Italy, Germany, *and* Flanders. *It grows like a Vine-Branch, about a Cubit long, with a yellow Flower, the stalk about a Cubit in length, the Fruit oblong, about the bigness of a small Egg, with a broad seed within, the Root small and fragrant. This is of less vertue then the rest, and less in use, unless it be with the omniscient* Apollo, *and* Matthiolus, *that follow the Rabble of vulgar Apothecaries; who when they never saw the long and bushy-rooted, and were perswaded that there was no Plant wanting in* Italy, *were easily perswaded that the* Clematitis *was the true long Birthwort.*

I need not here recite what *Dodoneus* has written of the climbing the bushy-rooted Birthwort, as being conformable to *Bauhinus*, *Daleschamp*, and others. Nor is it necessary to search for any better or more certain Authorities, to maintain what I have said for the bushy-rooted Birthwort. And therefore I will say no more, but that I had done ill not to have chosen it for the slender Birthwort of *Andromachus*, and for that which is to be us'd in Treacle, or had I taken it for the Plant to be us'd in the absence of the other. For which use they that chuse the *Clematitis*, honour it beyond its deserts;

all its parts being very far from Tenuity or ſlenderneſs, and therefore both in that, and in its vertues inferiour to the *Piſtolochia*, or buſhy-rooted Birthwort.

Having gather'd this Birthwort in the beginning of the Spring, when it begins to ſprout up, waſh it and cleanſe it from all its ſuperfluities, and hang it up in an Airy place out of the Sun, to dry, and ſo to be afterwards mix'd with the other Ingredients.

As for *Coſtus*, I believe the three ſorts which Authours have deſcrib'd, may be reduc'd into one. And I follow *Cluſius* in this, who ſays, *I am of this opinion, that there is but one ſort of* Coſtus. And *Bontius*, a Dutch Phyſician, affirms the ſame thing after *Garcias ab Horto*. For though *Dioſcorides*, and ſeveral others after him, have deſcrib'd three ſorts of *Coſtus*, the *Arabian*, *Indian*, and *Syriac*, and that they have ſtrain'd themſelves to give ſeveral ſhapes to theſe ſorts of *Coſtus*, and beyond whatever *Dioſcorides* has written, upon whom they all depend. Nevertheleſs, it is certain, that in *Europe* we ſee but one ſort of *Coſtus*, which is generally receiv'd and approv'd by all, and which has, as it were in contraction, all the marks which *Dioſcorides* has giv'n to all the three ſorts, except ſome kind of ſweetneſs, which length of time may have in ſome meaſure diſſipated. For the taſte of a Plant freſh-gather'd, is different from that which has been kept a-long time.

The *Coſtus* which is brought to us, is a good thick Root, of the bigneſs of a Man's fiſt, and ſometimes twice as big, and might well be a foot long, if it were brought to us intire; the outſide is of the colour of Aſhes, the inſide is white, enclining to the colour of Box. It is very fragrant, and at firſt taſte is ſomewhat ſweet, but afterwards it taſts bitter with a kind of Acrimony, but altogether Aromatic. *Coſtus* is rather light then ponderous, not being of a very compact ſubſtance. If we might take *Coſtus* for the rind of a ſhrub reſembling Elder, as ſome would have it to be, we ſhould then chooſe that ſort of *Coſtus* which is call'd *Corticoſus*, or *Barky*; which is a Bark white all over, very fragrant, and of an Aromatic taſte, having the reſemblance, but not the taſte nor colour of Cinamon. This *Barky-Coſtus* ſeems to me not to differ much from the true *Coſtus*, either in vertue or good qualities.

Few Perſons in *France* can aver that they have ſeen in the *Indies* the true Plant of Spikenard, which grows in great abundance in *Java*. *Bontius* ſays, that it grows upon the Mountains about fourteen leagues from *Batavia*, and that there is no going thither for fear of Tygers and Thieves, which are very numerous in thoſe parts. I can ſafely ſay, that I my ſelf have gather'd the *Falſe Nard* upon the Mountain *Genevre*, upon the Borders of the *Dauphinate*, next to *Piemont*, and found the Ears, or Spikes, crouded together in a round cluſter, underneath and next the ſuperficies of the Earth, having little Roots very ſlender underneath; the whole very much reſembling the figure of the true *Indian-Nard*, deſcrib'd by *Matthiolus* and others. The Ears or Spikes of the *Falſe Nard* are ſomewhat bigger then thoſe of the *Indian-Nard*, the hairy fibers ſcatter'd, and ſtanding like briſtles, and of a brown colour. They have almoſt no ſmell or taſte; in the middle is a woody part that ſerves all along for a foundation to the hairy part. The Ears of the true *Indian-Nard* are ſomewhat leſs, having no woody part; the fibers are of a yellow colour enclining to purple: it begins from the little Root, and being knit together, forms a kind of a Spike, or Ear, which keeps a-long time, very like to that of *Cyperus*; the taſte is very Aromatic, with ſome bitterneſs and acrimony, drying the Tongue and leaving behind it a kind of pleaſing ſcent. The little Roots of Spikenard under the Ear, are to be thrown away as of no uſe. The faireſt are to be choſen which muſt be gently ſhak'n in the hand to ſhake off the duſt; and the inner part muſt be drawn out at the upper part of the Ear or Spike, which is uſually more pale then all the reſt, which muſt be thrown away: the Spike thus cleans'd is to be made uſe of. You may alſo cut them before you go about to bruiſe them, according to the opinion of ſome. But it is better to let cutting alone, ſince the hair may be bruis'd, and reduc'd to Powder without it, among the other Ingredients.

Cinamon well-choſen, as I have already given directions, needs no other Preparation.

The preſt Oyl of Nutmegs, abounds ſo much in vertues, that we need not look after Natural Balſoms, for the moſt part ſophiſticated to put into Treacles, or any other internal compoſitions. I reſerve the Preparation thereof, to the Chapter of Oyls drawn by the Preſs.

It is not without reaſon that I have ſaid, That the moſt part of Balſoms which are ſold for natural, are ſophiſticated: For we may be ſure that the real Balm of *Judea* would be exceſſively dear, could we be aſſur'd that it were right; and that if we had not

not great cauſe to believe, that that which is brought to us is no other then a ſuppos'd Balſom. As for the Balſom of *Peru*, though it is probable, that we may have it right from thence, becauſe it is more plentiful and cheap; yet it is very liable to be counterfeited, and I could give the Deſcription of one that has been tak'n for true by many *Apothecaries* and *Druggiſts* of *France*, who having found there the principal markes which the right one ought to have, and finding it to be at a high rate, have purchas'd conſiderable quantities of it: though I make no queſtion but the cunningeſt of them all was deceiv'd. But I rather chooſe to omit this Deſcription, then to give any one the leaſt occaſion to cheat. I give this advice to thoſe that may or have been couz'ned, and who becauſe they may have this counterfeit Balſom at four Livres the pound, prefer it in the ancient Treacle before the preſs't Oyl of Nutmegs that coſts three or four times as much.

Cretan-Dittany is a Plant which has a great number of ſtalks covered with a white woolly down, and very much tufted; the leaves are alſo round and thick, the flowers are purpliſh, and very like thoſe of Violets, but of a more clear Violet-colour, and appear among the leaves at the tops of the ſtalks; the ſeed lies in the cup of the flower, when the flower is gone. You muſt endeavour to get freſh Dittany, gather'd when it was in flower, if it may be had; otherwiſe you muſt be content with the leaves well cleans'd.

The *Indian* leaf, call'd *Malabathrum*, is not a leaf without a root growing upon the water, like the Sea-Lintel, as ſome Writers would have it to be; but it is the leaf of a great Tree growing in the Country of *Cambaya*, and in ſeveral other parts of the *Indies*. The ends of the boughs which are often fixed to the leaves apparently demonſtrate, that it is a Tree which bears them. This leaf is very large, and reſembles that of the Citron-Tree; of a pale green colour, having three ſtrings ſeparated by equal Intervals, running along from one end to the other of the leaf. The upper part is ſmooth and ſhining, the under part rough; the taſte of it is Aromatical, participating of Nard, Mace, Cloves and Cinamon. It differs very much in ſmell, taſte, bigneſs, and the diſpoſal of the ribs from the Laurel-leaf, for which ſome have tak'n it without any ground at all. The leaves which are whole and green are alwayes the beſt.

The true Amomum is well known, and is brought to us in bunches, about the length of three or four Thumbs: This bunch has a rib that ſerves for ſupport to the husks, which are round, and as big as ſtones of Grapes of the colour of white Aſhes, ſmooth, and thicker cluſter'd then uſually Grapes are, being fix'd againſt their Baſis like the Grains of Pepper. The bunch is in part cover'd with ſix leaves like the Pomgranate-leaf, of which three are longer and grow farther out then the other three, which inter-divide them. The ſhells are full of a purpliſh-ſeed, almoſt ſquare, and very like in all things to the ſeeds of Cardamoms: Theſe grains, or ſeeds, join'd together make a round Figure, ſeparated nevertheleſs by very thin skins, but ſo cloſe thruſt together, that the entire little Globe ſeems to be compoſed but of three parts, though the ſeeds may be eaſily ſeparated by preſſing them between your Fingers: the husks and the skins muſt be thrown away, there being nothing to be made uſe of but the purpliſh well-grown ſeeds, rejecting thoſe that are black and wither'd. The taſte of theſe grains, is tart, piquant, and very Aromatick, and remains a good while in the Mouth.

The ſmaller Cardamom here preſcrib'd, is the moſt excellent of all; The ſeeds of it are four-ſquare, in little triangular husks, of the colour of white Aſhes, like the husks of Amomum; the ſeeds are alſo of the ſame colour and taſte, and divided into three parts by very thin skins. They are to be choſen and cleans'd like thoſe of Amomum.

The ſeed of *Macedonian* Parſley is of a pale green colour, ſmall, ſomewhat long-poynted and flat, of a ſharp and very Aromatic taſte and of a pleaſing ſmell. They muſt be very well cleans'd from dirt and other ſuperfluities.

The ſeed of *Ameos*, or Biſhop's-weed, is between that of common Parſley and Smallage; it is almoſt round, and very like to that of Sand-duſt, of which it bears the Name. We have two ſorts brought us, the taſte of which is very Aromatic and bitter. But the *Ameos* of *Creet*, the taſte and ſmell whereof participates of thoſe of Time and Baſil, is to be prefer'd before the other. This ſeed is to be cleans'd like the former.

The ſeed of *Seſili*, or Hart-wort of *Marſeilles*, is a little ſmaller then that of wild-Fennel, and very like it in Figure. It is of a pale green colour, of a ſharp Aromatic

and ſomewhat bitter taſte. It muſt be choſen new and well-grown, and muſt be well cleans'd.

Myrh is a Roſiny-Gum, which being new is of a yellow green colour, enclining to red, fatty, fragrant, ſharp, biting and very bitter; being full of whitiſh ſpots when it is broken, like the ſpots upon a Man's Nail. It muſt be choſen very pure, and as tranſparent as may be; and the bigger Tears are to be prefer'd before the leſſer.

We may be certain that the Tree which produces Storax, yields abundance of Tears. But I cannot believe that the Storax which is brought to us, or which they pretend to bring hither out of the *Eaſt* is the right Storax. The high price which it has been ſold for thoſe many years, has encourag'd the wickedneſs of thoſe Cheats; and the tryal I have made thereof has ſo far convinced me as not to truſt them any more.

It is not with Galbanum, nor ſalt Armoniac that theſe Tears are to be counterfeited, as ſome have thought, in regard the ſtrong and noiſome ſcent of the one and the other, could never compoſe that ſweet and pleaſing ſcent which they are careful to give to thoſe Tears which are vended for Storax. But moſt certainly they are counterfeited with ſome white Tears of Benjamin, or with ſome Roſiny Gum without ſcent, or which is eaſily out-ſcented by the Storax. To which purpoſe I have thought fit to publiſh what I have experimented, which is, that having Storax in Tears, whoſe ſmell, taſte, colour, and figure, were ſuch as are requir'd in true Storax, I undertook to ſoften one Tear in my hand intending to incorporate it afterwards with other drugs of a reſembling ſubſtance. I was aſtoniſh'd when I found all the good ſcent of the Storax to be loſt in my hand; and that ſame Tear was not fit to impart any thing of good ſcent or vertue to an Aromatic Balſom which I was making. Thereupon, truſting neither to the Storax made up like bowls, which is encreas'd with liquid Storax, nor to that other Storax ſold in Shops, light, and very full of Saw-duſt, I choſe a Storax of a delicious ſcent, full of Grains, or little Tears, and free from dirt, out of which I extracted the Gum in the following manner.

Having put eight ounces of this Storax into a Skillet, with twelve ounces of good White-wine, I ſtirr'd the whole gently with a Spatula, and when I found that the Storax was ſufficiently diſſolv'd, I preſently pour'd it out hot as it was, into a cloſe-woven ſtrong linnen-bag, and having bound it hard juſt above the ingredients, I preſt it between two hot plates, and drew out two ounces of pure Gum, as fair as it was fragrant, and which is in every thing ſuperiour to the ſorts of Storax in tears which is brought to us. I made uſe of this Gum in my Balſom with great ſatisfaction, and uſe it upon ſeveral other occaſions for Medicines, both Internal and External. They that meet with ſuch Storax as I have deſcrib'd, may take my advice, and purifie it by this means.

Opopanax is a Gum diſſolvable in any watry Liquors, which flows after inciſion from one of the Fennel-like Plants, call'd, All-heal, or *Panax Heracleum*. It comes out of the Plant liquid and white, but by degrees it becomes white and of a Gold-colour without-ſide. Opopanax is to be choſen new, in pure drops, fat, and white, at leaſt within, of a ſharp bitter taſte, and a ſtrong ſcent. Sagapenum call'd alſo Serapinum, becauſe it ſmells ſomewhat like the Pine, is a Gum diſſolvable in moiſt Liquors like Opoponax. It proceeds alſo from one of the *Ferula's*, or Fennel-like Plants, of a ſharp and ſomewhat bitter taſt, of a ſtrong and unpleaſant ſmell, white without and within, while it is new, but afterwards it grows ſomewhat reddiſh without; and in time it becomes of a dark colour, both within and without, like other Gums, eſpecially thoſe that are of a watry ſubſtance. The pureſt and the neweſt drops are to be made choice of.

I cannot be beaten out of that rational opinion that the Bags or Cods, which the Caſtors carry in that part, where we ſee the Teſticles of all other four-footed Animals, contain the true Caſtoreum that is to be put into this Treacle, and into all other Medicines where Caſtoreum is preſcrib'd. Nor is it to be wonder'd that while I acknowledge the principal matter contain'd in the Bags for the right Caſtoreum, I have tak'n the whole for the real Teſticles, as well in regard of the ſcituation of thoſe bags, as for the Apellation of *Fibri Teſtes*, or Caſtor-ſtones, which many Writers have given them. Conſidering alſo, that when I had diſcover'd the real Teſticles, ſerving to Generation, their ſmalneſs, and their privation of ſcent, caus'd me to neglect and throw them away, as altogether uſeleſs in Phyſic; eſpecially when upon examination of the Cods that contain the Caſtoreum, I obſerv'd their figure, both external and internal, accompany'd with ſeveral Fibers and Membranes, as alſo a ſubſtance very conformable to that of the Teſticles of other Animals, which may be pulveriz'd when they are dry. The unctu-

ous

ous part contain'd in a little distinct Vesicle in the same principal Tunicle that contains the Castoreum, not being capable to divert us from that thought, especially taking the Castor for a kind of amphibious creature, that may be term'd a Monster, as being one half like a Land-Animal, the other like a Fish. I am perswaded also that they who should see these Bags scituated as they are in the body of the living Animal, as also out of the body, and dry'd, as they are sold to us, would absolutely take them for the real Testicles, unless they had examin'd the things so strictly as the Gentlemen of the Academy-Royal, in their Anatomy of a Castor some years since, of which they have set forth a very exact description. But it is not the name of Testicles improperly given to these Purses, that hinders them from the true Castoreum, or from being put into the Treacle, and indeed as being to be preferr'd far before the true Treacle.

As for the choice of Castoreum, and the place where those Animals are tak'n that carry it, though most Writers prefer those of *Pontus*, I make no question, but that the Castors which are taken up and down upon the Rivers of *France*, *Swedeland*, *Poland*, *Germany*, *Canada*, and over all the *West-Indies*, may be every jot as good. For I could never observe any difference but only between the true Castoreum, and the counterfeit, which is not interdivided within with Fibers and Membranes, and is nothing but a mixture of certain stinking Gums, mingl'd with Powder of Castoreum, and the unctuous Juice which is found in the common, and principal Vesicles that enclose the Castoreum, which together make a tenacious mass, very much unlike the fleshy-substance of the true Castoreum, which may be easily reduc'd to Powder, and is only to be us'd in Treacle.

If *France* did not produce Saffron endow'd with all the good qualities that can be expected, we should be oblig'd to Forraign Countries. But because we have very good, with which we also furnish *Germany*, *Swedeland*, *Poland*, and other parts, we should do ill not to make use of it. Of all the Saffron that grows in *France*, that which grows in these Provinces that lye most to the South, seems to be preferr'd before any other, because of the Nature of the soyl. For all Aromatic Plants, that grow in such places, are to be preferr'd before those that grow toward the North. The yellow part upon which the hair of the Saffron grows, is to be clipp'd off with the point of a pair of Scissors, and that part of the Hair is to be made use of which is of a scarlet-colour.

Celtic-Spike, call'd by the Latins *Spica Celtica*, grows upon the *Pyrenean*-Mountains, and upon the Mountains of *Tyrol* in *Germany*. It is a small Plant but very Aromatic, which is brought to us in little Sheaves or Bundles, having no appearance of any Spike, but in its Root. I suppose also that the name of Spike was giv'n to it, because it smells very like to Spikenard. The vertue of the whole Plant is concenter'd in the Root. The Leaves, the Flowers, the strings, and all the other superfluities are to be thrown away. The Roots also must be spread in a moist place, and must be moisten'd themselves to make them less brittle, before you make them clean. Otherwise when you go about to pick out the superfluities with the point of a Pen-knife, the Root would break if it were too dry.

As for the Preparation of the Extract of Juniper-berries, I refer you to the Chapter of Extracts in the third Part of this *Pharmacopœa*.

As for the mixture of all the ingredients for this Treacle, you must observe the same method, as for that of the Ancients; only I will say this for the Extract of Juniper-berries, that it does not only perform the same thing as the despumated Honey, for the mixture and preservation of all the ingredients, but it very much augments the vertue of the Treacle, which is nothing inferiour to that of the Ancients, and works in all respects much more powerfully; there being in the whole composition, not one ingredient but what is chosen with Judgement. The Dose and use of the ancient Treacle may serve as a rule for this.

Theriaca Diatessaron.		*Diatessaron Treacle.*	
℞. *Radicum Gentianæ*,		℞. Roots of Gentian,	
Aristolochiæ rotundæ,		Round Birthwort,	
Baccarum Lauri,		Laurel-berries,	
Myrrhæ Electæ, an.	℥ ij.	Choice Myrrh, *an.*	℥ ij.
Mellis opt. despumati, &		The best clarify'd Honey, and	
Extracti Baccarum Juniperi, an.	℔ j.	Extract of Juniper-berries, *an.*	℔ j.

Make an Electuary according to Art.

This

This Treacle was invented particularly for the Poor. It is call'd *Diateſſaron*, becauſe it conſiſts but of four Ingredients that make up the Powder; which being mix'd with the Honey and Extract, make a very Soveraign remedy againſt Poyſon.

The Preparation of this Treacle is very eaſie; for there is no more to do, but to mix the Powder of the four ingredients, with the Honey and the Extract, and then to put up the compoſition for your occaſions.

This Treacle is not to be deſpis'd; it is good againſt all contagious Diſeaſes, biting of venemous Beaſts, the Apoplexy, Convulſions, and all cold Diſeaſes of the Head, as alſo againſt Worms, to fortifie the Stomach, and open all Obſtructions of the Bowels. The Doſe is the ſame with the other Treacles.

Mithridatium Damocratis.

℞. *Myrræ Troglodytidis,*
Croci,
Agarici,
Zinziberis,
Cinnamomi,
Nardi Indici,
Thuris Maſculi,
Seminis Thlaſpeos, an. ℥ *ij* ß.
Seſeleos Maſſilienſis,
Opobalſami,
Schœnanthi,
Stœchadis Arabicæ,
Coſti,
Galbani,
Terebinthinæ Chiæ,
Piperis longi,
Caſtorei,
Succi Hypocyſtidis,
Storacis Calamitæ,
Opopanacis,
Folii Indi,
Caſſiæ Ligneæ,
Polii Montani,
Piperis Albi,
Scordii,
Seminis Dauci Cretici,
Trochiſcorum Cyphæos,
Bdellii, an. ℥ j ß.
Nardi Celtici,
Gummi Arabici,
Petroſelini Macedonici,
Opii Thebaici,
Cardamomi minoris,
Seminis Feniculi,
Radicis Gentianæ,
Roſarum Rubrarum,
Dictamni Cretici, an. ℥ *x.*
Seminis Aniſi,
Radicis Acori Veri,
Ari,
Valerianæ majoris,
Sagapeni, an. ℥ *vj.*
Meu Athamantici,
Acaciæ Veræ,
Ventris Scinci,
Seminis Hyperici, an. ℥ *v.*
Mellis Opt. deſpumat. ℔ *xix.*
Vini Opt. *q.* ß.

Damocrates's *Mithridate.*

℞. Æthiopian Myrrh,
Saffron,
Agaric,
Ginger,
Cinamon,
Indian-Spikenard,
Male-Frankincenſe,
Treacle Muſtard-ſeed, *an.* ℥ ij ß.
Hartwort of *Marſeilles*,
Opobalſamum,
Camels-Hair,
Arabian Caſſidony,
Coſtus,
Galbanum,
Chio-Turpentine,
Long-Pepper,
Caſtoreum,
The juice of the Undergrowth of Cyſtus,
Calamite Storax,
Opopanax.
Indian-Leaf,
Caſſia-Wood,
Mountain-Poley.
White-Pepper,
Water-Germander,
Seed of Cretan wild-Carrot,
Trochiskes de Cyphi,
Bdellium, *an.* ℥ ij ß.
Celtic-Nard,
Arabian Gum,
Macedonian Stone-Parſley,
Theban-Opium,
Leſſer Cardamom,
Fennel-ſeed,
Root of Gentian,
Red-Roſes,
Cretan Dittany, *an.* ℥ *x.*
Anniſeed,
Roots of true Acorns,
Wake-Robin,
The bigger Valerian,
Sagapen, *an.* ℥ vi.
Athamantic Spignel,
True Acacia,
The belly of the Land Crocodile,
Seed of St. *John's*-wort, *an.* ℥ v.
The beſt clarify'd Honey, ℔ xix.
The beſt Wine, q ß.

I

I have inſerted this Receipt for Mithridate, that I might not be complained of for omitting ſo famous a Compoſition. And though there be as much reaſon for the reformation of this Mithridate, as for that of the ancient Treacle; yet I thought it not neceſſary for the latter, ſince the reformation of the Treacle may ſerve for both, at leaſt may ſerve as a good aſſiſtance to ingenuity.

A ſmaller quantity of Opium is here preſcrib'd than for the Mithridate, and the Trochiskes of Vipers and Squills are quite left out.

Agaric is an Excreſcence growing like a Muſhroom, upon the Trunks or upon the bigger boughs of old Trees. There are two ſorts, the Male and the Female. The Male is yellowiſh, heavy and compact, and more fit for Dyers than for Phyſick. That which is call'd the Female is moſt ſought after. The beſt is found upon the Larch-tree, by the Latines call'd *Laryx*. The Ancients talk'd of Agaric growing in a Province of *Sarmaria* call'd *Agaria*, either from the Agaric, or elſe from the River *Agarus* that waters it. We at this time make uſe of that Agaric which grows upon the high Mountains of the *Dauphinate*, which are the ancient *Alpes*, or upon the Mountains of *Trent*; though we are not to deſpiſe that which comes from the Eaſt, or from any other place, provided it have the principal Marks which are to be ſought for in Agaric, which are whiteneſs, lightneſs, cleanneſs, bigneſs, friability, penetrating ſcent, and extraordinary bitterneſs. Agaric is one of thoſe Medicines that purge with violence and by attraction. So that it may be as well left out of the Mithridate as out of the Treacle; by reaſon of the oppoſition of its vertue to the Cordial, and Alexipharmacal Quality of the other Medicines.

Ginger is very well known; and though there are reckoned two ſorts, Male and Female, yet Phyſic makes no difference, but only chuſes the neweſt and the beſt grown, white within, which is brought from the *Eaſt-Indies*; that which comes out of *America* not being ſo much in eſteem, principally becauſe of its dark colour.

Male Incenſe call'd *Olibanum* is well known in Shops; it is a Gum which muſt be choſen in large Tears; white, pure and weighty, of a ſharp and bitter taſte, and of a penetrating ſmell. I know not why they ſhould give it the name of Male, but only to diſtinguiſh the large and fair Tears from the common ones.

Writers deſcribe *Opobalſamum* to be a thick whitiſh tranſparent juice or Liquor, in ſmell reſembling Turpentine, but much more pleaſing. It ought to diſtil forth after inciſion made in the Dog-days, of the Branches of a Shrub call'd *Balſamum*, the wood whereof is call'd *Xylo-Balſamum*, the Branches whereof are brought to us in ſtreight pieces, but very brittle, and unequally knotted. The Bark of the wood is ſomewhat reddiſh without, but greeniſh within, and the wood underneath is whitiſh and full of pith. This wood when it is new, being broken, yields a ſmell very like to that of *Opobalſamum*, the taſte whereof is bitter and ſomewhat tart. The moſt eſteemed Plant of Balſom grows in *Judea*, and *Arabia Felix*, and by cultivation in the Gardens of the Grand Signior in *Ægypt*. It alſo grows in *Peru*, but inferiour in goodneſs and beauty. There is no *Opobalſamum* properly of *Judea*, which is not very dry; ſo that we cannot obſerve the eſſential Marks which Authors aſcribe to it; which are, that if you put a drop into water or Milk, it ſeems as if it would preſently diſſolve in thoſe Liquors, but it afterwards ſwims a-top, and you may gather it together with a ſtraw or a Needle; and that if you pour a drop upon a piece of Cloth, you may take it off again without leaving the leaſt ſpot or ſtain. The ſame Writers repreſent *Opobalſamum* to us, to be ſo penetrating, that the force and ſharpneſs of the ſmell is hard to be endured; ſo that not meeting now-a-days with any of theſe qualities, we have great reaſon to queſtion whether we have the right or no, and to be ſorry that a Liquor ſo famous ſhould be ſo little known to us. Which confirms in my opinion, that it is better to make uſe of preſs'd Oyl of Nutmegs both in Treacle and Mithridate, and in other Medicines where *Opobalſamum* is preſcrib'd, than to make uſe of impos'd *Opobalſamum* which we have ſo much reaſon to queſtion. So much the rather, becauſe that preſs'd Oyl of Nutmegs is of a nature between Gummy and Oyly, and preſſed from a Fruit very aromatical and full of vertue; and for that its taſte, ſmell, and penetration render it worthy of ſo good a place.

The word *Schoenanthos* is Greek, and ſignifies the Flower of a Reed, which is the beſt part of that Plant; for though the taſte and ſmell of that Reed aſſure us, that it is not void of vertue, yet we muſt believe that the Flower has ſomething more of conſiderable in it, for beauty, taſte, and ſmell being that of all Flowers, which longeſt preſerves all its good qualities, notwithſtanding its ſmallneſs and thinneſs, ſo that having been kept ſeveral years, it ſtill fills the Noſtrils with a ſtrong ſcent, and the mouth

with

with a ſharp and Aromatic taſt. The odoriferous Reed that bears this Flower grows in *Nabatea* a Province of *Arabia*, where it is ſo plentiful, that they littre their Camels and other Cattel with it. The hight of this Reed is about a foot, the Root ſmall ſlender and full of knots. The Plant is tufted and compos'd of ſeveral cluſter'd rows, of a pale green colour, intermix'd with ſome long ſtreight leaves, and pointed like the Reeds, near to the points whereof are to be found thoſe little Flowers, which are of a whitiſh colour enclining to Purple, diſpos'd in double ranks.

The Flowers of the Odoriferous Reed are not to be made uſe of till they are very well cleans'd; which I do thus. After I have ſifted through a coarſe Sieve the duſt which is uſually found among theſe Flowers, I ſpread them upon a ſheet of Paper, then I lay upon them a new coarſe cloth well ſcatter'd with hair, ſomewhat longer and broader then my hand. Then taking up the piece of cloth you ſhall find many Flowers ſticking to the cloth, which muſtbe pickt off and kept a-part: And this muſt be done till you have as many flowers as you ſtand in need of.

Galbanum, is a Gum diſſolvable in watry Liquors, like Opoponax and Sagapenum; it alſo flows after inciſion from one of the Ferula's or Fennel-leav'd-Plants, call'd Fennel-Gyant. The biggeſt Tears are to be choſen, pure, white, thick, of a ſharp and bitter taſte, and a ſtrong and unpleaſing ſmell.

Of all the Turpentines that flow from ſeveral Trees, and which we acknowledge for liquid Roſins, that which flows from the Turpentine-Tree is eſteem'd the beſt; It ought to be tranſparent, of a whitiſh colour enclining to green, of an indifferent ſtrong ſmell, and not diſpleaſing. The beſt Turpentine is brought from the Iſland of *Chio*; it is uſually not ſo thin as thoſe of *Venice*, and other places.

The long Pepper conſiſts of many ſmall grains, as it were ſet together in Rows, and not op'n and ſeparate; of an Aſh-colour, when it is ripe. The Leaves are like thoſe of the long Pepper, but of a paler green, and thinner; longer-pointed, and with a ſhorter foot-ſtalk. The taſte of long-Pepper, is like that of black-Pepper, but more moderate in heat and dryneſs; it ought to be new, and well-grown, and the foot-ſtalk ought to be caſt away.

The Juice of the undergrowth of Ciſtus, is drawn from a ſmall excreſcence, riſing from the Male and Female Ciſtus, *Ledum*, or ſweet Ciſtus, with upright ſtalks cover'd thick with Leaves, ſcarce a foot high; that with Sea-Purſlain Leaves is of a yellowiſh colour. The roots are as big as two or three thumbs, ſometimes a finger, ſometimes the whole hand in length, ſomewhat bigger at the top then bottom, and repreſenting a Pomegranate-flower at the top. They grow and flouriſh toward *May*. They are tender and Juicy, and yield a black acid Juice, which is depurated by being boyl'd over a ſmall fire, in an Earth'n-glaz'd-Veſſel, to the conſiſtence of an Extract ſomewhat ſolid, call'd Juice of Hypociſtis.

The Tree call'd *Caſſia Lignea*, is almoſt like to that which bears the Cinamon, and they grow together in the Iſland of *Ceylon*. Theſe two Barks, though born by different Trees, are boyl'd and dry'd after the ſame manner, and their taſte and ſcent is almoſt alike; their colour, ſhape, and thickneſs, differ almoſt in nothing, but the *Caſſia Lignea* is of a fatter, more muſcilaginous ſubſtance, which diſſolves by chewing in the mouth, whereas the Woody-part of Cinamon will not diſſolve, though you chew it never ſo long.

The ſeed of *Cretan*-Daucus, or Wild-Carrots, is to be preferr'd before any other; it is long like that of Cummin-ſeed, but not ſo big: the colour is white with a Velvet ſuperficies, the taſte and ſmell are pleaſing enough; however it is ſomewhat ſharp, and hot, but very Aromatic.

There are two ſorts of Mountain-Poley, one whoſe flowers, and all the upper part of the Leaves and Stalks is of a Gold-colour, the other white. Both the Plants are cover'd with a tufted Cotton, eſpecially the yellow; whoſe taſte and ſmell are very Aromatic, ſo that they fill the mouth at the ſame time with a mixture of ſeveral Aromatics. The yellow-Poley is to be preferr'd before the other.

The true *Carpobalſamom* is extremely ſcarce, or to ſay more truly, it is not to be had now-a-days, according to thoſe marks which Authours give of it. For they deſcribe it to be fix'd to the Plant with a cup; to be large, weighty, picquant and ſharp in taſte, cover'd with a ſmall Membrane of a deep yellow-colour, inclining to red; lin'd within, with other Membranes thicker then that without, and which contains within a yellow Honey-like ſubſtance, with a pleaſing ſcent like to that of *Opobalſamum*. But the Grains that we meet with in ſhops, have none of theſe marks: and though time might wear away ſome of theſe marks, yet it could not annihilate them all.

Which

Which makes me to doubt of their Legitimacy, and to ſubſtitute Cubebs in their place.

Cubebs, for colour, form and bigneſs, are very like black Pepper-corns, except that they have a little footſtake which faſtens them to a rib like the bunch of a Grape: Their taſte is biting and glowing, very bitter, but very Aromatic: They grow in the Iſland of *Java* upon Shrubs that climb upon other Trees like Ivy. Some Authors have written, that the Inhabitants boyl them before they will ſuffer them to be tranſported, fearing they might be ſown, and grow in ſome other place: But the little vent they have for them, and the ſmall price they are at, utterly deſtroys the vanity of ſuch a conjecture. They are good to heat and fortifie the Stomach, to open obſtructions of the Spleen, to correct the cold intemperature of the Matrix, and to excite Venery.

Trochiskes de Cyphi, you ſhall find in the Chapter of *Trochiskes*.

Bdellium comes from *Bactriana*, where it is produc'd by a black Tree as big as a white Olive-tree, the leaves whereof are like to thoſe of an Oak. *Bdellium* is a Gum, to which Authors have aſcrib'd for marks to be clear and yellow, like Wax or ſtrong Glue, to be bitter, fat, and to ſmell like *Unguis Odoratus*, when it is burnt.

The true *Acorus* is brought us from *Lithuania*; it is a Root that crawls upon the Earth, and is nouriſh'd by certain ſtrings that belong to it: It is very knotty, about a finger in bigneſs; of a white inclining to fleſh-colour, of a biting and bitter taſte, of a thin light ſubſtance, of a ſtrong ſcent, but very pleaſing.

The true Acacia is the thick juice of the fruit of a great Thorn-tree that grows in *Egypt*, the Flowre whereof is white, and the fruit contain'd in Husks like Lupins. This juice is of a high colour, and beautiful red, of a compact ſubſtance, but which will eaſily break by ſtriking upon it, when it is very dry: It is brought to us in Bowls done up in thin Bladders; it muſt be clear, and ſhine within when it is broken. The taſte ſhould be ſtyptic, ſtinging, and very Aromatic.

The *Sea-Scinkes*, are little Animals like to Lizards, or rather like to little Crocodiles, by which name they are call'd; they live part in the Water, part upon the Land: They go upon four legs very ſhort, and very ſmall; their Snouts are more pointed then a Lizards, and their Tails are thin and ſhort: They are beautiful to look upon, being cover'd with ſcales diſpos'd in a wonderful order of Silver-colour, ſometimes dark'nd to a Gold-colour, eſpecially upon the Backs. They are never ſo big as Crocodiles, and they breed in *Egypt* upon the Red Sea; in *Lybia*, and in the *Indies*: The reins or the belly of theſe Scinkes are choſen for Mithridate, though the other parts have their vertues alſo.

For the mixture of this Treacle, it is the ſame with that of Ancient Treacle.

As to the Vertues of Mithridate, they are almoſt the ſame with thoſe of Treacle, though ſomewhat inferiour in all things, particularly againſt the bitings of Serpents, to which the fleſh of Vipers is principally neceſſary; as alſo to aſſwage pain, and procure reſt: but then it wants that quantity of *Opium* which is in the Treacle.

Confectio Alkermes Regia.

℞. *Succi Pomorum redolentium,*
Aquæ Roſarum fragrantiſſimæ, an. ℔ iß.
Serici crudi mundati & minut. inciſi, ℔ *j.*
Omnia Matratio bene clauſo excepta horis 24 *in* Balneo Mariæ *digerantur: Tepide deinde ſericum torculari exprimamatur; Liquor vero cum ſacchari opt.* ℔ *ij. ad Electuarii ſolidi conſiſtentiam, coquatur. Ab igne tunc removeatur Electuarium & in illo ſucci recentis Kermeſini ſpiſſioris* ℔ *j. diſſolvatur & poſtmodum promiſceantur,*

Margaritarum Oriental. præparat.
Santali Citrini,
Cinnamoni Acutiſſimi, an. ℥ *j.*
Ambræ Griſiæ cum olei Cinnamomi Stillatitii Gut. iij. pulverata, ℥ ß.

Royal Confection Alkermes.

℞. Juice of fragrant Apples,
The moſt fragrant Roſe-water, *an.* ℔ iß.
Raw Silk cleans'd and cut ſmall, ℔ j.
Put them together into a Matraſs well ſtopt, and digeſt them for twenty four hours in *Balneo Mariæ*: Then ſqueeze the warm Silk in a Preſs, and boil the liquor to the conſiſtence of a ſolid Electuary with ℔ ij. of the beſt Sugar: Then take the Electuary from the fire, and diſſolve therein ℔ j. of the new thicker juice of *Kermes*: after that mix therewith,
Oriental Pearls prepar'd,
Yellow Saunders,
Biting Cinamon, *an.* ℥ j.
Ambergriſe pulveriz'd with three drops of diſtill'd Oyl of Cinamon, ℥ ß.

Lapidis Lazuli uſti, loti, & lævigati	℥ *ij.*	*Lapis Lazuli* burnt, waſh'd, and made ſmooth,	℥ ij.
Foliorum Auri,	℥*j.*	Leaves of Gold,	℥ j.
Moſchi Orientalis,	℥ ß.	Oriental Musk,	℥ ß.

Many Writers have attributed great vertue to raw Silk. But though the uſe thereof had been at all times unknown in Phyſic, my judgement is, that it is too fragrant, that it has too much beauty, that it affords too many conveniencies to humane Life, that there are too many wonders in the firſt Original, progreſs, labour and metamorphoſes of the worm which produces it, to be deſpis'd. And ſo much the rather, for that we know that all the parts of Animals, as alſo of their Excrements and Productions, are impregnated with a volatile Salt; and becauſe I am ſo far convinc'd of the extraordinary vertues of Volatile Salts, that I may be bold to call it the right hand of all Phyſic. For which reaſon, and for the continual uſe which ſeveral great and famous men have made of raw Silks in their Medicines, I ſay that it was not without ſufficient grounds preſcrib'd among thoſe other ingredients that make up this Compoſition.

That is call'd Raw Silk, which was never boil'd, but is ſtill as it were in the grain, out of which the worm has been but newly taken, four or five days after that little Artiſt has finiſh'd its work. For at that time this Silk is very pure, provided you take away the outward wrapping and the inward tunicle of the grain, which is next the worm. This Silk thus cleans'd will not fail to impart its vertues to this Confection, or where-ever elſe it ſhall be preſcrib'd.

For the methodical preparation of this Confection, you muſt pulverize apart the yellow Saunders and the Cinnamon very finely, and prepare the Pearls upon Porphyrie. You muſt heat red-hot and three times quench the *Lapis Lazuli* in Roſe-water, where it muſt alſo ſoak for 24 hours, then prepare it upon Porphyrie like the Pearls. Powder the Ambergriſe and the Musk together, mixing therewith three drops of Oyl of Cinnamon, which will haſten the pulverization, and prevent them from ſticking to the Mortar; and when they are pulveriz'd, mix them with the other Powders. In the mean time having taken away all the ſuperfluities of the raw Silk, put it into a Matraſs, and pour upon it the juice of Apples clarifi'd, and the Roſe-water preſcrib'd, and having ſtopp'd the Matraſs keep it four and twenty hours in *Balneo Mariæ* lukewarm. Then having ſtrain'd and ſtrongly preſs'd out the Silk, diſſolve in the Liquor two pound of fine Sugar, and boil them together in a glaz'd earthen Pipkin, over a moderate fire, to the conſiſtence of a ſolid Electuary, when you have taken it off the fire mingle with it a Pint of the preſs'd grains of Kermes, new and perfectly ripe. After which add thereto by degrees the Powders, and laſt of all the Leaves of Gold, and having put up the Confection in a Gally-Pot cloſe ſtopp'd, keep it for your uſe.

You might melt the Ambergreeſe in a ſmall part of the hot Syrup, with which it is to be incorporated, but it could not be well done, without ſome diſſipation of the ſweet odour, as alſo of the vertue of the Ambergreeſe, beſides that the beauty of the colour of the Confection would be quite ſpoil'd. And therefore the beſt Preparation of Ambergreeſe upon this occaſion is to powder it. You will find in this Receipt the weight of the Pearls, yellow Saunders, Cinnamon and Ambergreeſe augmented beyond what you ſhall find in the moſt part of other Receipts: But beſides that theſe ingredients are not to be ſpar'd in a Compoſition ſo highly eſteem'd, the increaſing of the quanitty of the Powders ſerves to render the Confection much better then it is wont to be.

As for the leaves of Gold, I ſhould have agreed with them, who affirm that theſe leaves afford no conſiderable vertue to this Confection, nor to any other Compoſitions, becauſe the Gold cannot communicate its vertue without having been firſt digeſted in the Stomach, and there chang'd its nature; and I ſhould have thought that this Gold in leaf had rather been for ornament then for any vertue, had not the following Relation caus'd me to alter my opinion.

Monſieur *Peter Couder*, Apothecary at *Milhau* in *Rouvergue*, a very honeſt man, and very skilful and knowing in his Art, and my very good Friend aſſur'd me, that ſome years ſince he was ſent for to a Lady of very high Quality, aged about threeſcore years, whoſe Face was extreamly full of red Pimples and Puſtulas, and who was troubl'd with a ſtinking breath; and that by the advice of ſeveral famous Phyſicians, he gave her for her ordinary Diet, Pullets that had been ſhut up in a Chamber eight days, and were fed with a Paſte made of Vipers, boil'd in a little water with Wheat in an earthen glaz'd Pot cover'd,

cover'd, continuing to feed the Pullets in the same manner, till they were good to eat: That the Lady having dyeted six months upon these Pullets, he dyeted her with Capons for the other six months, which besides the Paste of Vipers with which they were cramm'd, were also fed with Leaves of Gold mix'd among their Food; and that the Lady having continu'd the use of those Capons, at the end of the last six months found her self perfectly cur'd of both her Distempers, insomuch that having liv'd from that time to the Age of fourscore years, her body being entomb'd and tak'n up again four years after she was buried, was found to be as entire, as when she was first laid in her Grave.

In the mean time Monsieur *Conder*, resolving to search in the Capons-dung, for about eight marks in Leaves of Gold, which they had swallow'd from time to time, carefully caus'd the Dung to be swept together, and calcin'd the Excrements, and made use of Quicksilver to make an Amalgama of the Gold if there were any, and after he had exhal'd the Quicksilver Amalgama'd with the Gold, and had afterwards forc'd it to fusion with the addition of a little Borax, he recover'd about two marks in Gold, which had the weight, but the colour was much paler then that of ordinary Gold.

Upon which my judgement is this, that this great diminution of weight and change of colour, could not happen to the Gold, but that some of its parts were chang'd into the proper substance of the Capons, and that this could not happen, till the Gold was dissolv'd in the Capons Stomach, by the operation of their volatile Salt, joyn'd with the acid Liquor which is naturally in that part, doing almost the same thing which a Regal-Water would have done. So that we cannot but think that Leaves of Gold in Compositions cannot but be very commendable and useful; for besides the beauty and the conceit which they may put into the Head of the Patient, they may add their vertue to that of the other Ingredients.

They that live far from the places where Grains of Kermes grow, may make use of a trusty Friend, to send them the Syrup of Kermes prepar'd after my Method; with which they may at any time make the Confection. You may also make a Confection without Amber or Musk, chiefly for Women that are afraid of sweet scents.

This Confection is without question one of the best Cordials that ever Galenic Physick invented. For it repairs and recreates the Vital and Animal Spirits; it ceases Palpitations of the Heart, and Swounding-fits. It fortifies the Brain and all the Noble Parts very much; It is an Enemy to putrefaction, re-establishes the languishing and decay'd strength, drives away melancholy and sadness, and restores and preserves both body and mind in a good estate. It is taken upon the point of a Knife or dissolv'd in Wine, or in Broth, or in any Cordial or Cephalick Liquor. It is also mingl'd among Opiates or Electuaries both soft and solid. The usual Dose is from one Scruple to one Drachm. It is also mixed in Epithemes prescrib'd for the Heart and Liver.

Confectio de Hyacintho.

℞. *Lapidum Hyacinthorum,*
Coralli Rubri,
Boli Armenæ, &
Terræ Sigillatæ, an. ʒ ij ʒ ij.
Granorum Kermes,
Foliorum Dictamni Cretici,
Radicis Tormentillæ,
Seminis Citri Mundati,
Croci,
Myrrhæ Troglodytidis,
Rosarum Rubrarum,
Santalorum omnium,
Ossis e corde Cervi,
Rasuræ Cornu Cervi, &
Eboris,
Seminis Acetosæ,
Portulacæ, an. ʒ v ℈ j.
Lapidum Saphyrorum,
Smaragdorum,

Confection of Jacinths.

℞. Jacinth-Stones,
Red-Coral,
Bole-Armoniac, and
Seal'd Earth, *an.* ʒ ij ʒ ij.
Grains of Kermes,
Leaves of Cretan-Dittany,
Root of Tormentil,
Seed of Citron cleans'd,
Saffron,
Æthiopian-Myrrh,
Red-Roses,
All the Saunders,
The Bone of a Deers heart,
Shavings of Harts-horn, and
Ivory,
Seed of Sorrel, and
Purslain, *an.* ʒ v ℈ j.
Saphyrs,
Smaragds,

Topaziorum,

Topaziorum,		Topazes,	
Margaritarum Oriental.		Eaſtern-Pearls,	
Serici Crudi,		Raw-Silk,	
Foliorum Auri,		Leaves of Gold, and	
Argenti, an.	℈ *viij.*	Silver, *an.*	℈ viij.
Moſchi Orientalis,		Oriental-Musk,	
Ambræ Griſiæ, an.	*Gr. xx.*	Amber-griſe, *an.*	Gr. xx.
Syrupi Florum Tunicæ,	℔ *vj* ℥ *viij.*	Syrup of Clove-gillow-flowers,	℔ vi ℥ vii.

Make a Confection according to Art.

The great vent which ſeveral Cities have for this Confection, Alkermes, Treacle, and ſome other compoſitions of the ſame Nature, has not been ſufficient to ſatisfie the Avarice of certain Jumblers, who not content to foiſt into this compoſition ſeveral Ingredients altogether unuſeful, in the place of the true ones, which are uſually dear, make uſe of a Syrup extraordinarily boyl'd, to one entire pound of which they add an ounce, or at moſt an ounce and a half of Powder: for which they by their good wills would only take the Bole, if the Saffron-colour, the taſte of Myrrh, and the beauty of the Gold-Leaves, were not requiſite for them to conceal their cheat. So that we need not wonder that they ſell this confection and ſeveral others ſo cheap, and yet they make more profit far, then they who compound the Medicines right. They never ſeek after the true fragments of Jacinths or other precious Stones, the Oriental Pearls, nor the Bone in the Deer's-Heart; but being perfect cheats ſell for conſiderable rates, that which is good for nothing but to fill their own Pockets.

But to make it as it ſhould be, make choice of the true fragments of Jacinths, Saphyrs, Emraulds, Topazes, and Oriental Pearls, which you ſhall find among the Lapidaries, together with red-Corral. You may prepare all theſe things together, or a-part upon Porphyrie; in the ſame manner you may prepare the Eaſtern-Bole, and the *Terra Sigillata*; bruiſe together in a Braſs-Mortar, the bone of the Deer's-Heart, the Shavings of Harts-horn, and Ivory, the Sandals, the Root of Tormentil, the Grains of Kerms, the Cretan-Dittany, the Red-Roſes, the Myrrh, the Seeds of Citron, Sorrel, and Purſlain. Beat the Saffron apart, being dry'd before; beat alſo the Musk, and Ambergriſe apart, adding to them ſome part of the Citron-ſeed reſerv'd for that purpoſe: then mix all the Powders except the Saffron, which muſt be firſt put into a Marble-Mortar, there to be mix'd with a wood'n-Peſtle, in ſome ounces of the Syrup preſcrib'd, the conſiſtence whereof ought to be no thicker then that of ordinary Syrups; then add thereto by degrees the other Powders, joyning them, and intermixing with them together, at ſeveral repetitions all the Syrup, the quantity whereof ought to be but four times the weight of the Powder, whereas if it had been to have been boyl'd to the conſiſtence of a ſoft Electuary, the Powders would have ſuckt up ſix times as much in weight of Syrup, by reaſon of the dryneſs of the moſt part of the Ingredients. And therefore care muſt be tak'n, that neither the Phyſicians nor the Patients be deceiv'd in the little Doſes of this Confection, becauſe of the ſmall quantity of Powder which they contain, when the Syrup is more boyl'd then it ſhould be. When the Powders and Syrups are mix'd together, add the Leaves of Gold and Silver, and put up the Confection in a white-Earth'n-Pot well-ſtopp'd.

Some may wonder that Syrup of Clove-Gillow-flowers is here preſcrib'd, inſtead of Syrup of Lemons, which all Writers preſcribe. But when they ſhall find by experience, that this laſt being made uſe of fails not to work upon the Earths and Stones at the ſame time, to raiſe a great efferveſcency, and to cauſe the Electuary to ſwell, ſo as to make it run over if the pot be not very large, and by degrees to dark'n the colour, eſpecially if you put in any Ir'n Spatula; they will without doubt approve this change, in regard that Syrup of Gillow-flowers being very proper to ſtrength'n the Heart, the Brain, and all the Noble-parts, and to ſecond the good effects of this Compoſition, is alſo as fit to unite and embody all the Ingredients, imparting at the ſame time, its lovely purple-colour, and its delightful ſmell, without the fear of any efferveſcency, or alteration, which the acid of the Syrup of Lemons cauſes to the Earths and Stones, and at the ſame time to the whole confection.

If it be objected, that the Acid of the Syrup of Lemons ſerves to open the Stones, conſidering that the Juice of Lemons, which is the foundation of the Syrup, is able to diſſolve them; I anſwer, that that Juice making but a third part of the Syrup, and being very much weak'nd

weak'n'd by the addition of the Sugar, can act but very feebly, nor touch any more then the ſuperficies of the fragments, and ſo the ſucceſs would anſwer but ill to the intentions which they might have, conſidering alſo that the ſole Preparation of the Stones upon the Porphyrie, reduces them to that condition wherein they ought to be, to qualifie in the Stomach the ſharpneſs of the acids, which they meet with there.

The bones of Deer's-hearts are not ſo ſcarce, but that you may meet with them with little pains and expence; but if they were not to be had, you might in their place uſe the Harts-horn, when the Velvet-Head begins firſt to appear, and which are much better then the bones of the Hearts of Oxen, which ſome commend in their room.

The Shavings of Harts-horn is here very properly preferr'd efore Harts-horn burnt; becauſe the Shavings enjoy all the good parts, which the Harts-horn looſes in Uſtion. For it not only contains the muſcilaginous and Cordial part, which it affords to Gelly's, but the volatile Salt, Spirit, and Oyl, which we draw forth by diſtillation, all which parts vaniſh in Uſtion.

As for the Philoſophical Uſtion of Harts-horn, which ſome have allow'd, I cannot think any better of it; for though it be done with a heat leſs violent, yet the moſt part of the Juice is thereby loſt, and a good part of the volatile ſalt, Spirit and Oyl which it contain'd before.

The vertues of Confection of Jacinth are very little inferiour to thoſe of *Confectio Kermes: Hamech.* It has this alſo particular, that it cloſes more, and that it is more proper to kill Worms.

It is tak'n in Bolus alone, or mix'd with other Powders, or Opiates, or elſe diſſolv'd in Wine, or in Broth, or in ſome Cordial Liquor. The Doſe is from a Scruple to a Dram, and ſometimes two. It is alſo outwardly apply'd in liquid and ſolid Epithemes.

Electuarium Diaſcordium Emendatum.

℞. *Scordii,*
Roſarum Rubrarum Exungulatarum, &

Boli Armenæ, an.	℥j ß.
Reſinæ Styracis,	
Cinnamomi,	
Caſſiæ Ligneæ,	
Foliorum Dictamni Cretici,	
Radicum Tormentillæ,	
Biſtortæ,	
Gentianæ,	
Galbani,	
Succini,	
Terræ Lemniæ, an.	℥ ß.
Extracti Opii,	
Piperis Longi,	
Zinziberis,	
Seminis Oxalidis, an.	℥ *ij.*
Mellis Roſati colati, & in Electuarii mollis conſiſtentiam cocti,	℔ *iij* ℥ *iij.*
Vini Malvatici,	℥ *ij.*

A Reform'd Diaſcordium Electuary.

℞. Water-Germander,
Red-Roſes cleans'd from their Whites, and

Bole-Armenian, *an.*	℥j ß.
Storax,	
Cinnamon,	
Caſſia-Wood,	
Leaves of Cretan-Dittany,	
Roots of Tormentil,	
Snakeweed,	
Gentian,	
Galbanum,	
Amber,	
Lemnian Earth, *an.*	℥ ß.
Extract of Opium,	
Long-Pepper,	
Ginger,	
Sorrel-ſeed, *an.*	℥ ij.

Honey of Roſes ſtrain'd and boyl'd to the conſiſtence of a ſoft Electuary, ℔ ij ℥ iiij.

Malmſey,	℥ ij.

Make an Electuary according to Art.

It was well done to make uſe of Red-Roſes cleans'd in this Electuary, and to put in Honey of Roſes, inſtead of common Honey, to preſerve the room of Conſerve of Roſes, which *Fracaſtorius*, Authour of this Electuary had preſcrib'd. The reaſon of this change was, for that though Conſerve of Roſes may be beaten, and paſs'd through a ſieve turn'd the wrong way, it has however thoſe thick parts that will make the body of the Electuary ſeem to be ill united, and will remain at the bottom of the Mortar, when you diſſolve the Electuary in any Liquor. Whereas the dry Roſes pulveriz'd with

with other Ingredients, cauſe the body of the Electuary to ſeem more uniform, and will preſerve their vertue a longer time, by means of the Honey which encloſes it. On the other ſide, the Honey of Roſes being impregnated with the vertue of the Red-Roſes, is at leaſt as proper for mixture, union, and preſervation of the Powders, as common Honey, and fortifying the vertue of the Red-Roſes, renders the Electuary more odoriferous and pleaſant, then otherwiſe it would be.

With as good reaſon is the quantity of the Water-Germander augmented, as well becauſe it is a Plant that abounds in vertue, as for that it gives the name, and ſerves as a foundation to the Electuary, and therefore ought not to be leſs in quantity then any other of the Ingredients us'd in the Powder.

The Roſin of Storax, is here preferr'd before Storax in Tears, for the reaſons giv'n in the Reformation of Treacle.

The Gum-Arabic is left out, which could only ſerve as a Glue to the Electuary, and Amber is put into its place, whoſe Cephalic, Cordial, and Hyſteric vertues are eſteem'd by all Authors.

The Preparation of this Electuary will be found to be very eaſie, if after you have well-choſen and cleans'd all the Ingredients, without taking care to diſſolve any Gum in Wine, according to the cuſtom of the Ancients, you reduce them only into Powder in a great Braſs-Mortar, among the other Ingredients, and having paſs'd them all through a ſilk-ſieve, and diſſolv'd the two drams of Extract of *Opium*, in two ounces of Malmſy, or good Spaniſh-Wine, you incorporate the whole with Honey of Roſes clarify'd and boil'd to the conſiſtence of a ſoft Electuary.

This Electuary is very little inferiour in vertue to the Treacle, and indeed is to be preferr'd before it in Diſeaſes, where too much heat may be dangerous. It is particularly us'd in Malignant Fevers, in all Epidemic Diſeaſes; and is very much commended not only as a cure, but a preſervative againſt the Peſtilence. It is very much eſteem'd againſt the Worms, and againſt all putrefaction, againſt Windy-Cholics, want of retention in the Stomach, againſt Diarrhea's, Dyſenteries, and all the difficulties of the Inteſtines, to ſtop Fluxes, to aſſwage Pains; the ordinary Doſe being from one Scruple to one Dram. It is tak'n in Bolus, or diſſolv'd in Wine, Broth, or any Cordial-Liquor.

Opiata Salomonis.

℞. *Citri Saccharo conditi,* ℥ *viij.*
Conſervæ Oxytriphylli,
Florum Roriſmarini, &
Bugloſſi, an. ℥ *ij.*
Mithridatii veteris, ℥ *j.*
Roſarum Rubrarum Exungulat. ſiccarum,
Radicum Enulæ Campanæ, &
Dictamni Cretici,
Seminis Contra-Vermes,
Citri mundati,
Cardui Benedicti,
Raſuræ Cornu Cervi, an. ℥ ß.
Corticis Citri ſicci,
Santali Citrini,
Radicis Gentianæ,
Oſſis e Corde Cervi, an, ℥ *ij.*
Cinnamomi,
Macis,
Caryophyllorum, &
Cardamomi minoris, an. ℥ *j.*
Grana Juniperi in Aceto ſcillitico per noctem infuſa, N°. *xxiv.*

Salomon's *Opiate.*

℞. Citron condited with Sugar, ℥ viij.
Conſerve of Wood-Sorrel,
Flowers of Roſemary, and
Bugloſs, *an.* ℥ ij.
Of Mithridate, ℥ j.
Red-Roſes dry'd and cleans'd,
Roots of Elecampane, and
Cretan-Dittany,
Wormſeed, and
Seeds of Citron cleans'd,
Carduus Benedictus, and
Shavings of Harts-horn, *an.* ℥ ß.
Dry'd Citron-rind,
Yellow-Saunders,
Root of Gentian,
Bone of a Deer's-heart, *an.* ℥ ij.
Cinnamon,
Mace,
Cloves, and
Leſſer Cardamoms, *an.* ℥ j.
Juniper-berries infus'd a whole night in
Vinegar of Squills, N°. xxiv.

Make up the Opiate with Syrup of the Juice of Citrons.

Foubert was the firſt that publiſh'd this Opiate, and would have you to believe that one *Salomon* was the firſt that made it. It is ſo ſet down in *Reneus* and *Bauderon*. The quantity

quantity of the Ingredients is however different in some things. Particularly the Bone of Deers-heart is not mention'd in any of the Editions of *Bauderon*, whether it were to spare cost, or out of inadvertency, I will not determine. No matter who was the Authour of this Opiate, but we may be assur'd that it ought to have its place in this *Pharmacopœa*. It may be also observ'd, that this Receipt is somewhat different from the rest, but the alterations are certainly for the better.

The Sugar in Powder is here very unnecessary, because all the Ingredients are to be incorporated with Syrup of Citron, which has in it self Sugar enough without needing any more in the Opiate. Red-Roses dry'd are to be preferr'd before the Conserve, for the reasons giv'n in the *Diascordium*. The Conserve of Wood-Sorrel is preferr'd before Sorrel, because it is a Cordial incomparably much better. The dry Root of Elecampane is put instead of the Conserve, but in lesser quantity, out of regard to the Sugar, which makes at least two thirds of the Conserve; as also to the moisture and weight of the Roots, when it is us'd instead of the Conserve. The Leaves of Cretan-Dittany, much augment the force of the Opiate. The flowers of Rosemary and Bugloss, will become almost impalpable in beating in the Mortar.

To prepare this Opiate, cut the dry Citron-peel, and beat it in a great Brass-Mortar with the Saunders, then add the Roots of Elecampane, Dittany, and Gentian, the bone of Deer's-heart, the shavings of Harts-horn, and mingling by little and little all the Seeds, and other Ingredients which are to be pulveriz'd, and also the infus'd Juniper-berries infus'd the night before in Vinegar of Squills. Pass the Powder through a silk-sieve; Bruise the Citron-rind condited in a Marble-Mortar with the Conserves of Rosemary and Bugloss-Flowers, and pass them through a hair-sieve, the wrong side uppermost. Then moist'n this Pulp with about twice as much the weight of Syrup of Citron, such as is sold in the Shops, in which mixture incorporate the Mithridate, and by little and little, and alternatively the Powders, and the rest of the Syrup, the proportion whereof may be three times the weight of the Powder, though the Authour prescribes no more then to give the Opiate its due consistency. There is no fire to be us'd for the mixture of this Opiate, which is to be put up close in a white Gally-pot for use.

This Opiate is good against the Pestilence, and all Epidemic Diseases. It strength'ns the Heart and Stomach, kills the Worms in the Stomach and Bowels, resists putrefaction, stays Vomiting, creates an Appetite, and helps digestion. It is much us'd in *Languedoc*. The Dose and manner of taking it is the same with *Diascordium*, and *Confection of Jacinth*.

Antidotum Orvietanum.

℞. *Radicum Scorzoneræ,*
Carlinæ,
Imperatoriæ,
Angelicæ,
Bistortæ,
Aristolochiæ tenuis,
Contra-yervæ,
Dictamni Albi,
Galangæ,
Gentianæ,
Costi,
Acori veri,
Seminis Petroselini Macedonici,
Foliorum Salviæ,
Rorismarini,
Galegæ,
Cardui Benedicti,
Dictamni Cretici,
Baccarum Lauri, &
Juniperi, an. ℥j.
Cinnamomi,
Caryophyllorum,
Macis, an. ℥ß.
Viperarum siccarum cum cordibus & Hepatibus, &

An Orvietan Antidote.

℞. Roots of Vipers-grass,
Carline-Thistle,
Masterwort,
Angelica,
Snakeweed,
Thin Birthwort,
Contra-yerva,
White-Dittany,
Galanga,
Gentian,
Costus,
True Acorus,
Seed of *Macedonian* Stone-Parsley,
Leaves of Sage,
Rosemary,
Goats-Rue,
Blessed Thistle,
Cretan-Dittany,
Berries of Laurel, and
Juniper, *an.* ℥j.
Cinamon,
Gillow-flowers,
Mace, *an.* ℥ß.
Dry'd Vipers with the Hearts and Livers, and

Theriacæ

Theriacæ Veteris, an.	℥ *iv.*	Old Treacle, *an.*	℥ iv.
Mellis opt. despumati,	℔ *viij.*	Best clarify'd Honey,	℔ viij.

The good effects that the Orvietan well-prepar'd has formerly produc'd, has giv'n occasion to divers cheats, to use all their endeavours to make the World believe, that either they or some of their Predecessors have been the sole inventers thereof, and that only they had the true Receipt. Insomuch that several of these Impostors have over-spread Provinces and Kingdoms, and under the fraudulent appearance of some good success, by pantalooning and buffooning it, before the credulous people in public places, have caught them by their Money, and got considerable sums together, by the extraordinary vent of their suppos'd Orvietan. Considering the great quantity whereof, it was impossible for them to have found the necessary Ingredients, or to have had time to make a just Preparation, if they had either been willing, or had been able. Whence it has come to pass, that in several places they have not been able to secure themselves upon their Stages from the Poysons that have been brought them, by Persons that were not of their own confederacy, no more then from the bitings of Asps and Vipers, with which they had not been before familiar. Had these Impostors met with distrustful persons that took delight to discover their Impostures, they had not over-run so many Countries, nor cousen'd such a World of people; nor would they have had such easie Licenses to prepare and sell unpunish'd a Medicine that ought not to pass the hands of any but Men of credit and understanding.

All the Leaves and Roots must be dry'd and pulveriz'd together in a great Brass-Mortar, beginning with the most solid. Pass them through a silk-sierce cover'd, and having scumm'd the Honey, without any addition of moisture, add some part of the Powder to it, and continue to mingle alternatively sometimes the Honey, and sometimes the Powder, till the whole be incorporated, and reduc'd to the consistency of a soft Electuary, which you must let alone to cool, and then put up in a Pot close stopt for your use.

The proportion of Honey is larger here then for the Treacle of the Ancients, because there is neither Oyl of Nutmegs, nor Balsom, nor Turpentine, nor any other juice to officiate for the Honey; and for that otherwise, the dryness of the Powders would predominate over the Honey, suck up the Moisture, and drying the Electuary, would give way for the Air to enter and corrupt the whole Mass.

Orvietan thus prepar'd is of great efficacy against all sorts of Poysons, against the Small-pox, Measles, and all sorts of Epidemic Diseases. It is also proper against all cold Diseases of the Brain and Stomach, and against all Windy-cholicks. The Dose is from a Scruple to a Dram, and sometimes to two, for strong persons. It may be tak'n upon the point of a Knife, or wrapt up like a Bolus, or dissolv'd in Wine, or some Cordial Liquor.

Electuarium de Satyrio.

℞. *Radicum Satyrii succulentarum in aqua Naphæ ad mollitiem coctarum,* ℥ *iv.*
Radicis Eringii conditæ,
Pistaciarum mundatarum,
Confectionis Alkermes cum Moscho & Ambra, an. ℥ *ij.*
Nucis moschatæ conditæ,
Zinziberis conditi, an. ℥ *j.*
Renum Scincorum,
Priapi, &
Testiculorum Cervi,
Pulveris Viperini, an. ʒ *vj.*
Ambræ Grisiæ,
Seminis Erucæ,
Fraxini, ℈
Piperis longi, &

Satyrion Electuary.

℞. The Juicy-roots of Satyrion boyl'd very soft in Orange-flower-water, ℥ iv.
Root of Eringo's condited,
Pistaches cleans'd,
Confectio Alkermes with Musk and Amber, *an.* ℥ ij.
Nutmegs condited,
Ginger condited, *an.* ℥ j.
Kidneys of Land-Crocodiles,
Pizzle, and
Stones of a Deer,
Powder of Vipers, *an.* ʒ vj.
Ambergrise,
Seeds of Rocket, and
Ash,
Long-Pepper, and
Cardamom

Cardamomi minoris, an.	ʒ j ß.	Leſſer Cardamoms, *an.*	ʒ j ß
Moſchi Orientalis,	ʒ ß	Oriental Musk,	ʒ ß
Oleorum Cinnamomi, &		Oyls of Cinnamon, and	
Caryophillorum, an.	*gutt. vj.*	Cloves, *an.*	drops vj.

We ſhall meet within ſeveral Diſpenſatories ſeveral Receipts of *Diaſatyrion,* or Electuaries reſembling it in name and qualities. But you ſhall hardly find one whoſe Ingredients are more proper to produce the Effects expected from ſuch a Compoſition, or whoſe quantities are more regular.

Take the Roots of Satyrion well grown, caſting away the Fibers and wither'd parts. Cleanſe them from their Rind and all ſuperfluities, and boil them gently in Orange-flower water, in a glaz'd earthen-Pot cover'd, 'till they are ſufficiently tender; then bruiſe them in a Marble Mortar, and paſs them through a Hair-Seve turn'd the wrong-ſide uppermoſt. In the ſame manner beat and ſift the condited Eringo-Root, the Piſtaches, the Nutmegs and the Ginger; Raſp the Harts-Pizzle, cut the Stones ſmall, being both dry'd by fire in a Chimney, and beat them in a Braſs-Mortar with the Pepper, Cardamoms, Seeds, Scinc's reins, and Vipers dry'd; and paſs the powder through a ſilk-Sieve cover'd; bruiſe the Musk apart, mixing with it never ſo little Sugar candy'd; and the Ambergreeſe alſo apart, mixing with it ſome drops of Oyl of Cloves; then mingle the Pulps with the Confection of Alkermes, all the Powders and Oyls, in a Marble-Mortar with a wooden-Peſtle, adding as much Syrup of Gillow-flowers as is requiſite to give the whole a due conſiſtence of an Electuary: Then put it up cloſe for uſe.

This Electuary is very proper to reſtore decay'd ſtrength; it fortifies and heats thoſe that the Latins call *frigidos & maleficiatos, frigid and bewitch'd*: It multiplies Seed, and provokes and diſpoſes people to Luſt. It may be us'd by both Sexes; but the Musk and the Ambergriſe muſt be left out, when giv'n to Women that cannot away with ſweet ſcents; the Doſe is from one dram to two. This Electuary is to be tak'n faſting Morning and Evening in Bolus, drinking after it a Glaſs of *Spaniſh*-wine, wherein you may alſo diſſolve the Electuary. It may be uſed as often as occaſion requires; and if it be extraordinary, take half an Ounce.

Philonium Magnum.

℞. *Seminis Hyoſciami, &*
Papaveris Albi, an. ʒ v.
Extract. Opii, ʒ ij ß.
Caſſiæ ligneæ,
Cinnamomi, an. ʒ j ß.
Seminis Apii,
Petroſelini Macedonici,
Feniculi,
Dauci Cretici,
Coſti,
Myrrhæ,
Caſtorei, an. ʒ j.
Croci,
Pyrethri,
Nardi Indicæ, an. ℈ j.
Mellis optimi deſpumat. ℥ ix.

The great Philonium, or Pain-aſſwager.

℞. Seed of Henbane, and
White Poppy, *an.* ʒ v.
Extract of Opium, ʒ ij ß.
Caſſia-wood,
Cinnamon, *an.* ʒ j ß.
Seed of Parſley,
Macedonian ſtone-Parſley,
Fennel,
Cretan wild Carrot,
Coſtus,
Myrrh,
Caſtoreum, *an.* ʒ j.
Saffron,
Pellitory of *Spain,*
Indian Spikenard, *an.* ℈ j
Beſt clarify'd Honey. ℥ ix.

Wonder not that Euphorbium is left out of this Compoſition; eſpecially ſince the Ancients made uſe of it, pretending it was a true Corrector of Opium. But they that underſtand the nature of Euphorbium, and know that it is a Gum very hot, very biting, and very violent in its operations, when it is us'd but in a ſmall quantity, will never queſtion but that it has great need it ſelf of being corrected, and finding that it is never to be mix'd but among Remedies that may temper its heat, qualifie its acrimony, and refrain its violence will never uſe it at all in any Remedies whatſoever to be taken inwardly. Its extraordinary concuſſion of the brain, caus'd by the

leaſt particle of Euphorbium taken at the noſtril; and the violent and long continued ſneezings which it provokes, are enough to make any perſon fear the violence of a Gum ſo terrible to thoſe who have beheld its effects. And the more reaſon they will have to fear them, when they conſider that Euphorbium is one of the moſt violent Purgers that are to be found amongſt ſimple Drugs, ſo that the weight of two grains will make an extraordinary havock. The heat of Coſtus, or of any of the other ingredients that make up this Opiate, is inconſiderable to that of this Gum. And it is no wonder that Opium ſo often us'd to ſtop the violent effects of purgative Medicines, is not powerful enough to tame the violent effects of Euphorbium. Nevertheleſs there is ſome probability that the apprehenſion which the Ancients had of the coldneſs of Opium, mov'd them to have recourſe to extraordinary hot Remedies, to counterballance that vainly imagin'd coldneſs; not conſidering that all the parts of Opium, except the earthy, are hot, as they will find that examine them.

Pulverize thoſe Ingredients that are to be pulveriz'd, and paſs them through a ſilk'n-Sierce cover'd. Diſſolve the Extract of Opium in about an Ounce of good Malmſey, and having incorporated it with a ſmall quantity of ſcumm'd Honey warm, add by degrees ſometimes the Powder, and ſometimes the Honey, till the whole be diſpens'd, and that all the Ingredients are well mix'd and united together. Then when the Opiate is cold put it up in a white earthen Pot.

Philonium appeaſes all inward pains that happen to the Stomach, Belly, Hypochondrium's, Liver, Spleen, Reins, and Matrix, eſpecially proceeding from a cold cauſe. It diſſipates the Hiccup and Ventoſities, moderates the violence of Coughs; is highly eſteem'd againſt Dyſenteries, and internal fluxes of blood; it remedies difficulties of Urine; it relieves againſt Pleuriſies, ſtops Fluxes, reſtores the weak and languiſhing. Above all things, it is highly commended againſt Cholicks. It may be taken in Bolus, or diſſolv'd in Wine, or in Cordial water. The Doſe is from half a Scruple to half a Dram. It is commonly made uſe of in Anodyne Clyſters, from half a Dram to two. It is alſo us'd in Narcotick Liniments, mix'd with *Unguentum populeum*, or other Medicines.

Electuarium de Baccis Lauri.		*Electuary of Laurel Berries.*	
℞. *Baccarum Lauri, &*		℞. Laurel Berries, and	
Foliorum Rutæ ſiccorum, an.	℥ x.	Dry'd Leaves of Rue, *an.*	℥ x.
Sagapeni,		Sagapene,	
Opoponacis, an.	℥ ß.	Opoponax, *an.*	℥ ß.
Seminis Ameos,		Seeds of Biſhops-weed,	
Cumini,		Cumin,	
Nigellæ Romanæ,		Roman Nigell,	
Liguſtici,		Libiſtick,	
Carvi,		Caraway,	
Dauci Cretici,		Cretan wild Carrot,	
Acori veri,		True Acorus,	
Origani,		Origany,	
Amygdalarum amararum,		Sweet Almonds,	
Piperis longi,		Long Pepper,	
Nigri,		Black Pepper,	
Mentaſtri,		Wild Mint,	
Caſtorei, an.	℥ ij.	Caſtoreum, *an.*	℥ ij.
Mellis opt. deſpumat. triplex pondus.		Of the beſt deſpumated Honey, treble the weight.	

The Berries of Laurel muſt not be inferiour in quantity to the Leaves of Rue, becauſe they are the foundation of the whole. The quantities of the Sagapenum and Opoponax are alike, becauſe they are alike in qualities. The reſt require no alteration.

The Preparation of this Electuary is very eaſie. For having pulveriz'd the Gums among the dry Ingredients, and paſs'd the whole through a ſilk'n-Sierce cover'd, incorporate the Powder at ſeveral intervals, by little and little, with three times the weight of warm purifi'd Honey: And put up the Electuary when it is cold.

This

This Electuary is very much recommended for the eaſe and cure of windy Cholicks, and particularly the Iliac paſſion. It is proper in all difficulties of Urine, and againſt Hyſteric paſſions. The Doſe is from a ſcruple to a dram, and ſometimes to two: For Clyſters it is generally preſcrib'd from half an Ounce to an Ounce in proper Decoctions.

Electuarium Micleta.

℞. *Mirabolanorum Citrinorum,*
Chebulorum,
Indorum,
Bellericorum, &
Emblicorum mundatorum, an. ℥ v.

In pulverem redigantur & leviter torreſiant, deinde

℞. *Seminum Naſturtii,*
Aniſi,
Cumini,
Carvi,
Feniculi, &
Ameos, an. ℥ iij.

Terantur, pauco aceto irrorentur, & ſiccentur, tunc

℞. *Spodii ex Ebore,*
Balauſtiorum,
Sumach,
Maſtich.
Gummi Arabici, an. ℥ ij ß.

Electuary of Micleta

℞. Mirabolans yellow,
Chebula,
Indian,
Bellerica, and
Emblica, *an.* ℥ v.

Reduce them into Powder, and parch them, then

℞. Seeds of Creſſes,
Aniſe,
Cumin,
Caraway,
Fennel,
Biſhops-weed, *an.* ℥ iij.

Bruiſe them, ſprinkle them with a little Vinegar, dry them, then

℞. Spodium of Ivory,
Pomegranate Flowers,
Sumach,
Maſtich,
Gum Arabic, *an.* ℥ ij ß.

Take away the Kernels from the Mirabolans, and make uſe of the dry pulp that covers them, which you muſt pulverize, and lightly parch in an Iron-Skillet or Pan over a ſmall fire, ſtirring the Powder often with a Spatula. Pulverize the Seeds groſly, and ſprinkle them with good Vinegar, and then having dry'd them, pound them outright in a large Brazen Mortar among the Pomegranate Flowers, the Spode, the Sumach, the Gum Arabic, and the powder of Mirabolans, and paſs them all through a ſilk Sieve. Pulverize the Maſtich apart, which muſt be choſen in tears, which may be eaſily done, by adding ſome few drops of water to keep it from ſticking to the Mortar and Peſtle. Mix the Powders very well, and incorporate them at ſeveral repetitions with four times as much the weight of warm Syrup of Mirtles, and the Electuary will be well made, and fit to be put up in a proper Pot to be kept for uſe.

The Spode which is but calcin'd Ivory, is not to be made uſe of in Compoſitions, which require the principal parts of the Ivory, that conſiſt of its volatile ſalt, ſpirit and oyl, which are wholly diſſipated by Calcination: But the principal operation of this Electuary being founded only upon the aſtringency of the Ingredients that compound it, and the terreſtrial and reſtringent quality of the Ivory remaining after Calcination, it may be here preſcrib'd well enough to the purpoſe.

This Electuary is very binding, and proper for the cure of Dyſenteries, and all ſorts of Fluxes of the belly; it ſerves to ſtay all internal Fluxes of blood, as alſo of the Hemorrhoids; it is alſo good to ſtay vomiting, and the inordinate flowing of the Menſtruums, the Whites, and old Gonorrheas, difficult to cure. The Doſe is from half a dram to two drams. It may be taken upon the point of a Knife, or in Bolus; or elſe diſſolved in red Wine, or ſome aſtringent Liquor. It is alſo preſcrib'd in aſtringent Clyſters from half an Ounce to an Ounce.

Electuarium Aperiens Catharticum D. D. D' AQUIN.

℞ *Foliorum Sennæ Orientalis Mundatorum,* ℥iiij.
Diacrydion,
Trochiſchorum Alhandal
Agarici Electi,
Rhabarbari, &
Seminis Violarum, an. ℥jß.
Sagapeni,
Myrrhæ,
Ammoniaci, an. ℥j.
Antimonii Diaphoretici,
Mercurii dulcis, &
Pulveris trium Santalorum, an. ℥vj.
Salis Martis, &
Tamariſci, an. ℥ß.
Mellis opt. abſque Liquoris additione deſpumati, ℔ vj.

An opening purging Electuary of Monſieur D' AQUIN.

℞ The cleanſed leaves of Oriental Senna, ℥ iiij.
Diagridion
Trochisks of Alhandal,
Choſen Agaric,
Rhubarb, and
Seeds of Violets, *an.* ℥ jß.
Sagapeni,
Myrrhe,
Ammoniac, *an.* ℥ j.
Diaphoretic Antimony,
Mercurius dulcis,
Powder of the Three Saunders, *an.* ℥ vj.
Salt of Iron,
Tamarisks,
The beſt Honey deſpumated without the addition of Liquors. ℔ vj.

After you have carefully choſen and cleanſed all the Ingredients of this Electuary, and got the Sagapenum, the Myrrhe, and Ammoniac in pure tears, pulverize the Gums among the other dry Medicaments. But if you find them a little too clammy, mix no more then the Powder can well bear without being too viſcous, and reſerve the reſt of the Gums to melt in a great Braſs-Mortar heated; and there incorporate them firſt with ſome ſmall portion of the deſpumated Honey preſcribed for the Electuary, then mix the Salts, and continue adding by degrees, ſometimes the Honey, ſometimes the Powders, till all the Ingredients are perfectly well united, adding at the latter end the Mercurius dulcis, and the Diaphoretic Antimony: by this means the Electuary will be well made and fit to be put up in a cloſe Pot.

Monſieur *D' AQUIN* gave me the Receipt of this Electuary to impart it to publick view, as a Remedy very proper to open obſtructions of the Liver, Spleen, Pancreas, Meſentery and the Matrix, and at the ſame time to void the tenacious humours that gather in thoſe parts, for want of their wonted paſſage. The good effects of it will alſo appear if it be rightly adminiſtred in Cachexies, Quartane Agues, Hypocondriac diſtempers, and Dropſies; and particularly in the Diſeaſes of Women, as the Green-Sickneſs, retention of the Menſtruums, and in all the Maladies and Symptoms that proceed from obſtructions of the Matrix. The doſe is from two drams to half an ounce; and to ſix drams to Hydropſical perſons that are of age, where a leſs doſe does not work effectually. It may be given in Bolus, diſſolv'd in proper Liquors, or mix'd with other Medicaments. But then regard muſt be had to the nature of the purgative Medicines with which it is joyn'd, and the Doſe of this Electuary muſt be proportion'd accordingly.

Electuarium Catholicum duplicato Rhabarbaro.

℞. *Polypodii Quercini contuſi,* ℥ viij.
Seminis Fenículi, ℥jß.
Coquantur igne moderato in aquæ communis ℔ *viij. ad dimidiæ partis conſumptionem; colentur & exprimantur; colatura cum ſaccharo opt.* ℔ *iiij. coquatur ad Electuarii mollis conſiſtentiam: ab igne remotis adde Pulparum Caſſiæ & Tamarindarum Orienta-*

Catholicon, or univerſal purging Electuary with a double quantity of Rhubarb.

℞. Polypody of the Oak bruiſed, ℥viij.
Fennel-ſeed, ℥ jß.
Boyl them over a moderate fire in ℔ viij. of common water, to the conſumption of the half part, ſtrain and preſs them. Boyl the ſtrain'd Liquor with ℔ iiij. of the fineſt Sugar, to the conſiſtence of an Electuary: when they are taken off the

lium

lium inſpiſſatarum, an. ℥iiij.

Deinde ſenſim permiſce Pulveres ſequentes.

℞. *Rhabarbari Electi, &*
Foliorum Sennæ Orientalium mundatorum, an. ℥ iiij.
Seminis Violarum &
Aniſi, an. ℥ij.
Glycyrrhiſæ raſæ, ℥ j.
Seminum quatuor frig.maj.mundat.an. ℥ ß.

fire, add to them Pulps of Caſſia and thicken'd Oriental Tamarinds together, *an.* ℥ iiij.
Then by degrees mingle the following Powders.

℞. Choice Rhubarb and Leaves of Oriental Senna cleanſed, *an.* ℥iiij.
Seeds of Violets and
Aniſe, *an.* ℥ ij.
Scrap'd Liquorice, ℥ j.
The four greater cold Seeds cleanſed, *an.* ℥ ß.

You will find that this Electuary differs in many things from that of the Ancients, as alſo of the Moderns: But the difference ſeems to be very rational. In the firſt place the quantity of Polypodie preſcrib'd by the Ancients, is remov'd and added to the Decoction; that by imparting to the Electuary the vertue of all the Polipody to prevent an inconvenience, which is, that the Polipody being of it ſelf very dry, and being moiſten'd with the Decoction that remains among the Sugar, ſwells and becomes by that means thicker than the reſt of the Electuary, and is leſs pleaſing to the taſt and more difficult to be diſſolv'd.

The taking quite away the two drachms of Sugar candi'd, and ſo much Sugar pennet, as the Ancients had preſcrib'd in this Electuary, will be no wonder to thoſe, who ſhall conſider how little they avail in ſo ſmall a quantity. Whereas the Rhubarb doubl'd in its quantity renders the Electuary not only more effectual, but anſwers the proportion of the Powders, and ſupplies the place of the Polipody cut off. Nor muſt we diſapprove the choice here made of Violet-ſeed, inſtead of the dry'd Flowers; in regard this Seed contains the principal yertue of the Plant: whereas the Flowers together with their colour have loſt whatever they had of good. Upon which take this advertiſement, that certain Violet-flowers, which they dry in great quantities in *Languedoc*, and which they ſell for Violet-flowers are no other then the Flowers of that Plant which Authors call *Viola Tricolor* or *Flos Trinitatis*, in Engliſh *Panſies*, or *Hartseaſe*, whoſe quantities are very different from the true Violets.

There are ſome that beat the Rhubarb a-part, but there is no neceſſity for that, in regard it may be very well beaten among the other dry ingredients. The Liquorice muſt be ſcraped, and the Senna and Anniſe very well cleans'd, and beaten all together with the Rhubarb, the Violet, and cold Seeds, and paſſed through a ſilk'n-ſeirce. The Powder being made, bruiſe the Polipody very well, and boyl it over a moderate Fire in ℔. *viij.* of Water, as preſcrib'd, adding at the laſt the Fennel bruis'd. Then ſtrain the Decoction, and preſs out the ſediment. Take ſixteen ounces of good Caſſia and extract the pulp, and paſs it through a hair-ſieve revers'd, to get four Ounces, which you muſt reſerve. Moiſten with the Decoction, ſix ounces of Oriental Tamarinds, and having held them for ſome time over the hot Embers, beat them in a Marble-Morter with a Wooden Peſtle, and paſs the pulp through a hair-ſieve revers'd, repeating the ſame operation till all the pulp be paſs'd through, except two ounces of Lee's. Then evaporate the moiſture of the pulps, ſtirring them from time to time with a wodden Spatula till they are ſufficiently thicken'd. Then boyl the Sugar with the reſt of the Decoction, to the conſiſtence of a ſoft Electuary, and having put the pulps into a Baſon, pour upon them ſome part of the Syrup, and having incorporated them together, add at ſeveral repetitions, ſometimes Powder, ſometimes Syrup, till all the ingredients are perfectly mingl'd. And when the Electuary is cold put it up in a Syrup-pot.

This Electuary is called Catholicon, becauſe it is an Univerſal purger of ill humors out of the body; as being compos'd of Medicaments of which ſome are proper to purge Flegm, others Choller, and others Melancholly; for, though I do not believe that any ſimple or compound Medicament is able to purge Choler, or any other ſingle humour, and ſeparate it from the reſt which are in the Bowels and Stomach, yet may we believe this Electuary to be an Univerſal Purger very effectual and very gentle. Which makes it often us'd in continu'd and intermitting Agues, in Dyſenteries, Diarrheas, and defects of retention in the Stomack and Bowels. It may be given to all Ages and Sexes, particularly to Women with Child; becauſe as it gently purges off the ill humors, it ſtrengthens all the parts and leaves no bad effects behind it. The Doſe is from two

Drachms

Drachms to an Ounce. It is giv'n in Bolus, or dissolv'd in some distill'd water or proper decoction. It may be also mix'd with other Medicaments, or dissolv'd in Glisters, and then the Dose is from an Ounce to an Ounce and a half.

Electuarium Lenitivum.

℞. *Hordei Mundati,*
Polypodii Quercini,
Fol. Sennæ Oriental. mundat.
Passularum purgatarum, an. ℥ *ij.*
Jujubarum,
Sebesten,
Tamarindorum, &
Prunorum Dulcium enucleatorum, an. ℥ *j.*
Mercurialis, ℥ j ß
Violarum recentium, & Capill. Ven. Montspelienſis, an. M j.
Glycyrrhizæ, ℥ ß
Coquantur ex arte in Aquæ communis ℔ *ix.*
In Colatura expressa dissolve,

Sacchari optimi, Hij ℔ *ix.*
Coque ad Electuarii mollis consistentiam: ab igne remotis adde,

Pulparum Cassiæ,
Tamarindorum,
Prunorum Dulcium,
Conservæ Violarum, &
Pulveris Sennæ mundat. an. ℥ *vj.*
Rhei Elect. &
Seminis Anisi pulveratorum, an. ℥ j.

Lenitive Electuary.

℞. Cleans'd French Barley,
Polypody of the Oak,
Cleans'd leaves of Oriental Senna,
Ston'd Raisins, *an.* ℥ ji.
Jujubs,
Sebesten,
Tamarinds, and
Sweet Prunes ston'd, *an.* ℥ j.
Herb Mercury,
Fresh Violets, and *Venus*-hair of *Montpeliter, an.* M j.
Liquorice, ℥ ß
Boil them according to Art in ℔ ix. of ordinary water: in the Liquor strain'd and press'd, dissolve
Of the best Sugar, Hij ℔ ix.
Boil them to the consistence of a soft Electuary: Take them off the fire, and add,
Pulps of Cassia,
Tamarinds,
Sweet Prunes,
Conserve of Violets,
Powder of Senna cleans'd, *an.* ℥ vj.
Choice Rhubarb, and
Anniseed powder'd, *an.* ℥ j.

In regard it is uncertain who was the Author of this Electuary, it happens that the Receipts of it are very various in dispensatories, and that the quantities of the Ingredients are ill proportioned. For they that understand the nature of the Ingredients of this Electuary and their preparation and proportion, can never think six ounces of Sugar, set down in several receipts, enough for the Pulps and Powders in this Electuary; and that there was reason to augment it too two pound. They will also acknowledge that the Rhubarb is added with as good judgment, to make the Electuary more effectual, though left out by others.

Boyl the cleansed Barley in the water for a good hour, together with the bruis'd Polypody; then add the Fruit, cleans'd and cut, and then the Mercury, which must boyl with the rest above a quarter of an hour; then put in the Senna, Liquorice, Venus Hair, and Violets, and having giv'n them some bublings, take the Decoction from off the Fire, and when it is half cold, strain and press it forth, and having added to it, two pound of Sugar, boyl them together to the consistence of a soft Electuary, and when it is off the Fire, incorporate by little and little the Pulps, Powders, and conserve of Violets stampt in a Marble-Mortar and pass'd through a hair-sieve, and when the whole is well mix'd and cold, put it up.

The vertues of this Electuary are very near the same with those of Catholicon, but somewhat inferior: However it is more proper to soften and make the passages slippery. The dose and manner of taking are almost the same with those of Catholicon; but it is more commonly us'd in Glisters then otherwise.

Electuarium Lenitivum, pro Clysteribus.

℞. *Polypodii Quercini contusi,* ℔ *iij.*
Foliorum Malvæ,

Lenitive Electuary for Glysters.

℞. Polypody of the Oak bruis'd, ℔ iij.
Leaves of Mallows,
Althea,

Althæa,
Violanæ,
Parietariæ,
Mercurialis, &
Senecionis, an. M iiij.
Florum Camomil. &
Melilot. an. M ij.
Coquantur ex Arte in aquæ communis ℔ *xxx. Colatura cum mellis communis* ℔ *xxxx. coquatur ad Electuarii mollis consistentiam; deinde dilue*

Pulpæ prunorum dulcium, ℔ *iiij.*
Cassiæ, &
Tamarindorum, an. ℔ *ij.*
Postmodum adde pulveres sequentes,
℞. *Radicum Brioniæ,*
Hermodactylorum,
Liquiritiæ,
Foliorum Sennæ Orientalis,
Summitatum Gratiolæ,
Seminis Violarum, &
Anisi, an. ℥ *xx.*
Rhabarbari, &
Agarici, an. ℥ *ix.*

Marsh-Mallows,
March-Violets,
Paritary of the Wall,
Mercury, and
Groundsel, *an.* M iiij.
Flowers of Camomil, and,
Melilot, *an.* M ij.
Boil all these according to Art in ℔ xxx. of ordinary water; boil the strain'd Liquor with ℔ xxxx. of common Honey to the consistence of a soft Electuary; then mix
Pulp of sweet Prunes, ℔ iiij.
Cassia, and
Tamarinds, *an.* ℔ ij.
Then add the following Powders,
℞. Roots of Briony,
Hermodactyles,
Liquorice,
Leaves of Oriental Senna,
Tops of Hedg-Hysop,
Seeds of Violets, and
Anise, *an.* ℥ xx.
Rhubarb, and
Agaric, ℥ ix.

This Electuary, which may be call'd Lenitive for Glysters, will work good effects, and may be long kept, if following this Receipt, you are careful to prepare it rightly. I know there are some persons that do not so much regard it; who rather chusing to sell bad Glysters then good, make up their Lenitive with the worst Ingredients in their Shops, insomuch that they will put in the Sediments of the Infusions of their Roots, mingling the Pulp of Prunes with a little Honey, and giving that the Name of *Lenitive Electuary*. But these bad Examples are to be laid aside, as well for the easiness of the preparation, the smalness of the expence, as for the good which they may do, and the facility of being detected by the colour and consistence, wherein it very much resembles *Catholicon*.

Bruise the Polypody, and boil it in the water for a good hour; then boil the Herbs, being cut, for half an hour, after which add the Flowers; and having let them bubble a while, strain and press out the Decoction; wherein having dissolv'd the Honey prescrib'd, and having pass'd them through a Hair-Sieve, boil them over a moderate fire to the consistence of a soft Electuary: Scum it, and when it is half cold, mix the Pulps first by degrees, and then the Powders, observing the same method as for other soft Electuaries. When it is cold, put it up close.

The use of this Lenitive is so familiar, that I need not insist upon it; being only us'd in Clysters, to which purpose it is dissolv'd in some proper Decoction with Honeys, Sugar, Oyls, or other Remedies. The Dose is from half an Ounce to an Ounce, and sometimes to an Ounce and a half.

Electuarium Diaprunum, Simplex & Compositum.

℞. *Pruna Damascena recentia & matura, No. C.*
Coquantur igne lento in Aquæ, ℔ *iij.*

Deinde per Cribrum inversum trajiciantur, & pulpa igne lento inspissetur & servetur.
In decocto prunorum leviter coquatur,
Seminis violarum contusi, ℥ *j.*

Electuary of Prunes, Simple and Compound.

℞. Damasus Prunes new and ripe, No. C.
Boil them over a soft fire in three pints of water,
Then pass them through a reverst Sieve, and thick'n the Pulp with a gentle heat, and keep it.
In the decoction of the Prunes gently boil
Violet-seed bruis'd, ℥ j.

Colatura

Colatura cum Sacchari opt. ℔ *ij. ad Electuarii mollis consistentiam coquatur,*

Parum refrigerato permisce,
Pulpæ prædict. prunorum, ℔ *j.*
Pulpæ Cassiæ, &
Tamarindorum, an. ʒ *j.*
Et tandem sequentia pulverata,
℞. *Rhabarb. Elect. &*
Seminis Violarum, an. ʒ *j.*
Rosarum rubrarum exungulatarum,

Santali Citrini &
Rubri,
Rasuræ Eboris,
Succi Glycyrrhizæ, an. ʒ *vj.*
Sem. 4. frig. mag. mund. an. ʒ *j.*
Quod Compositum sive Laxativum fieri poterit, si Electuarii cuique libræ adhuc Calenti, Diagridii subtiliter pulverati ʒ ß *permisceatur.*

Boil the straining with two pound of the best Sugar, to the consistence of a soft Electuary,
When it is a little cold, mix
Of the foresaid pulp of Prunes, ℔ j.
Pulp of Cassia, and
Tamarinds, *an.* ʒ j.
And then these following powders,
℞. Choice Rhubarb,
Violet-seeds, *an.* ʒ j.
Red roses cleans'd from their white bottoms,
Sanders Yellow and
Red,
Shavings of Yvory,
Juice of Liquorice, *an.* ʒ vj.
Four cold seeds cleans'd, *an.* ʒ j.
Which may be made Compound or Laxative, if to every pound of the Electuary yet warm, you add half a dram of Diagridion finely pulveriz'd.

The Dose of Rhubarb and Violet-seed was judiciously augmented, to render it a little more purgative. The seeds of Endive, Barberries and Purslane, were on purpose left out, as useless; as also the Gum-Tragacanth, which was only a Glue to the Electuary: The yellow Sanders was preferr'd before the white; as also the shavings of Yvory before Spodium, for the reasons already recited. The rest of the Ingredients were not chang'd, but their Dose only augmented, to the end the just proportions of Powder might be found in the Electuary, which must be thus prepar'd.

Having put the Prunes into an Earthen-glaz'd Pot, boil them over a soft fire in three pints of water, till they are very soft; then leave the Decoction in the pot: pass the Prunes through a Hair-Sieve reverst, to get the Pulp, the superfluous moisture whereof you must evaporate in a Dish over a soft fire, stirring it from time to time with a *Spatula*, till it be conveniently thick. In the mean time, prepare an ounce of Cassia, and an ounce of Tamarinds, as I have already directed, and mix them, and set them by with the Prunes: Then gently boil the Violet-seed bruis'd in the reserv'd Decoction of Prunes, the Liquor whereof must be afterwards strain'd; and having added thereto two pound of good Sugar, boil them over a soft fire to the consistence of a thin Electuary. When it is half cold, mix first the Pulps, and then the Powders; and when the whole is well incorporated, and cold, put up the Electuary for use.

If you would prepare a Compound *Diaprunum*, and more Laxative, mingle half a dram of *Diagridion* finely powder'd with every pound of Electuary warm, and take care that the Union and mixture be very exactly made.

Simple *Diaprunum* is rarely prescrib'd, as being not purgative at all; but the Compound is us'd to purge choleric Serosities: It is us'd in continu'd and intermitting Agues, that proceed from superfluity of choler; it is also prescrib'd in diseases of the Breast, the Kidneys, and Bladder; for it makes the passages slippery, and gently carries away the matters there detain'd, and tempers the heat of the parts where they were lodg'd. It is sometimes taken alone, sometimes mix'd with other Purgatives in Bolus, or dissolv'd in Medicines, or other proper Liquors. The Dose of the Laxative is from one Dram to five or six, and sometimes to an Ounce for strong Constitutions. The Simple *Diaprunum* is giv'n from two Drams to an Ounce, in Diseases that require not much Purgation.

Electuarium Diaphœnicum.

℞. *Pulpæ Dactylorum in Hydromelite coctorum, per cribrum inversum trajectæ & inspissatæ, &*
Penidiorum recenter paratorum, an. ℔ ß.

Electuary of Dates.

℞. Pulp of Dates boil'd in Hydromel, pass'd through a Sieve reverst, and thick'nd, and
Penedice newly prepar'd, *an,* ℔ ß.

Amygdalarum

Amygdalarum dulcium excorticatarum, ℥ *iij* ß.	Sweet Almonds, the skins tak'n off, ℥iij ß.
Turbith electi, ℥ *iiij*.	Choſen Turbith, ℥ iiij.
Diagrydii, ℥ *j* ß.	Diagrydion, ℥j ß.
Zinziberis,	Ginger,
Piperis Albi,	White Pepper,
Macis,	Mace,
Cinnamomi,	Cinnamon,
Foliorum Rutæ ſiccorum,	Dry-leaves of Rue,
Seminis Feniculi,	Fennel-ſeed,
Dauci, an. ℥ *ij*.	Wild Carrot-ſeed, *an.* ℥ ij.
Mellis Deſpumati, ℔ *ij*.	Clarifi'd-Honey, ℔ ij.

I know no ill qualitie in the Dates, that ſhould oblige *Meſue* and his Diſciples to ſeek for a Corrective, and to macerate them three days in Vinegar before you put them into the Electuary. This Correction is as needleſs as that of Coriander in Vinegar: Thus the Ancients have fallen into many ſuch Errours, for want of underſtanding the parts that compoſe mixt Bodies: But our Moderns are become more Judicious. *Fernelius* was the firſt that rejected this Maceration, and directed the boiling them in Hydromel; which others induc'd by reaſon have ſince imitated. The other Medicaments are well choſen, and well proportion'd in the Receipt which *Fernelius* has given of this Electuary.

Having cleans'd the Dates from their inward skin and ſtones, weigh out about ſeven Ounces; and having cut or bruis'd them in a Marble-Mortar, boil them over a gentle fire in a glaz'd Earthen-pot in two pints of Hydromel, till they are ſufficiently tender: then beat them in a Marble-Mortar with a Wood'n-Peſtle, and paſs the Pulp through a Hair-ſieve reverſt, and ſet it aſide. Peel off the Almond-skins with the point of a Knife: Pulverize together, in a great Braſs-Mortar, the Turbith, Ginger, Pepper, Mace, Cinnamon, Leaves of Rue, the Fennel, and wild Carrot-ſeed, mixing therewith as many peel'd Almonds as the Powder will bear, without growing too fat. The Scammonie muſt be powder'd apart in the ſame Mortar, mixing ſome Almonds with it. Sift both the Powders through a Silk-Sieve; and having well mix'd them, ſet them aſide. Thoſe Almonds that remain'd muſt be beaten in a Marble-Mortar with the Dates, and paſs'd through the ſame Sieve: Then take two pints of Honey clarifi'd and boil'd to the conſiſtence of a ſoft Electuary, the Pennets and the decoction of Dates, and boil them together over a gentle fire, to the conſiſtence mention'd; and when it is half cold, mix the Pulps with it by degrees. You may alſo ſet the whole over a very ſoft fire, and ſtirring it gently with a Wood'n-Peſtle, evaporate the ſuperfluous moyſture; then taking it off the fire, mix the Powders by degrees, as before.

This *Diaphœnic* purges alike both Flegm and Choleric Humours: It is uſeful in continu'd and intermitting Agues; as alſo againſt pains in the Stomach that proceed from abundance of Humours. It is very proper to carry away Hydropical Humours, and the Seroſities which cauſe the *Sciatica*, Rhumatiſmes, and defluxions upon the Eyes, upon the Teeth, and upon other parts. It may be taken in Bolus, or diſſolv'd in Liquors, or mix'd with other Remedies. The Doſe is from one Dram to half an Ounce, and ſometimes to a whole Ounce for ſtrong Conſtitutions.

Benedicta Laxativa.

℞. *Turbith Electi*,
Radicis Eſulæ minoris aceto præparatæ, an. ℥ *x*.
Hermodactylorum,
Diagrydii,
Roſarum Rubrarum, an. ℥ *vj*.
Caryophyllorum,
Spicæ Nardi,
Zinziberis,
Croci,
Macro-Piperis,

The Bleſſed Laxative.

℞. Choſen Turbith,
Roots of Pine-ſpurge prepar'd with Vinegar, *an.* ℥ x.
Hermodactyles,
Diagrydion,
Red Roſes, *an.* ℥ vj.
Cloves,
Spikenard,
Ginger,
Saffron,
Long Pepper,

Amomi,	Amomum,
Cardamomi minoris,	Leſſer Cardamom,
Seminum Apii,	Seeds of Smallage,
Petroſelini,	Parſley,
Carui,	Caraway,
Feniculi,	Fennel,
Aſparagi,	Aſparagus,
Ruſci,	Butchers-broom,
Saxifragiæ,	Saxifrage,
Milii ſolis,	Gromel,
Sal Gemmæ,	Sal Gemmæ,
Galangæ,	Galanga,
Macis, an. ʒ j.	Mace, *an.* ʒ j.
Mellis opt. deſpumat & cocti, ℔ ij ß.	The beſt Honey deſpumated and boil'd, ℔ ij ß.

Make an Electuary.

Though the ſmalneſs of the Root of Pine-ſpurge may diſhearten Apothecaries that complain of their time and pains, it is however to be preferr'd before the Roots of any of the other Spurges, eſpecially the bigger, whoſe ill qualities are publiſht by *Meſue*, and other Authors. The uſe which I have made all my life, and which I have ſeen made with good ſucceſs for this Compoſition, and the frequent experience and advantage I have made of the Extract drawn from this Plant, without adding any Corrective, confirm me in the Opinion of not imploying any other Root, but that of Pine-ſpurge.

And though I find no neceſſity of preparing the Root with Vinegar, yet out of Reverence to Antiquity, I think that after you have well waſh'd and cleans'd theſe little Roots, inſtead of ſteeping them 24 hours in Vinegar, as ſome do, it will be enough to ſprinkle them only, ſo much as will ſerve to moiſten them; for ſhould they be ſoak'd in Vinegar, their Milky Juice, wherein reſides their chiefeſt vertue, being thereby diſſolv'd, there would only remain the Terreſtrial and unprofitable part: But obſerving my Method, the Roots being impregnated with the vertue of the Vinegar, will preſerve all their good qualities.

They that conſider how little ten drams of Powder'd-Sugar will advantage this Compoſition, will think it but reaſonable to leave it quite out, and approve the Preſcription of two pound of deſpumated Honey, inſtead of a pound and a half; in regard that there being no Liquor preſcrib'd in this Electuary, a pound and a half of Honey will not be enough for the quantity and drineſs of the Powders.

Pulverize all the Ingredients together in a large Braſs Mortar, beginning with thoſe which are hardeſt, and ſierce them through a Silk-ſieve, but beat and ſift the Scammony apart, and mingle it afterwards with the Powders: Then take two pound of fair Honey clarifi'd, and boil'd to the conſiſtence of a ſoft Electuary; and having heated it a little, incorporate the Powders with it, as already directed, and when the Compoſition is cold, put it up.

The *Bleſſed Laxative* purges Flegme and Seroſities, but particularly thoſe of the Joynts. It is alſo very much recommended to carry off the impurities of the Reins and Bladder, as alſo of the Matrix. The Doſe, and manner of taking, is very near the ſame with that of *Diaphœnicon*, but it is more commonly us'd in Clyſters, then tak'n inwardly.

Electuarium Caryo-Coſtinum.	*Electuary of Cloves and Coſtus.*
℞. *Coſti,*	℞. Coſtus,
Caryophyllorum,	Cloves,
Zinziberis,	Ginger,
Cumini, an. ʒ ij.	Cumin, *an.* ʒ ij.
Diagrydii,	Diagrydium,
Hermodactylorum, an. ʒ ß.	Hermodactyles, *an.* ʒ ß.
Mellis opt. deſpumat. ʒ viij.	Honey deſpumated, ʒ viij.

In moſt Diſpenſatories, we meet not with above ſix ounces of Honey preſcrib'd, with

with an equal proportion of Powder: But becauſe this Compoſition is not much us'd, becauſe all the Ingredients of the Powders are heating and unpleaſant, and for that the whole becomes dry if long kept, it was thought convenient to augment the Doſe of Honey to a fourth part; And as for the Wine, becauſe they that preſcribe it would have it boil and conſume with the Honey, you cannot think that any thing elſe will remain but the flegmatic and terreſtrial part. So that it is better to leave it quite out; ſince it ſuffices to take very pure Honey, boil it a little, and ſcum it off the fire; and when it is half cold, to incorporate the Powders with it, obſerving the ſame Rules as for other ſoft Electuaries.

This Electuary is proper to purge Choleric and Melancholic Seroſities. It is us'd in Cachexies, in Maladies that proceed from Viſcoſity of Humours: It opens Obſtructions, and diſſolves Tumours in the Bowels: It is often us'd to purge the Gouty, eſpecially when the Humour of the Gout is cold. The Doſe is from two drams to half an ounce in Bolus, or diſſolv'd in proper Liquors.

Confectio Hamech Correcta.

℞. *Polypodii quercini contuſi,*
Paſſularum mundatarum, &
Prunorum Damaſcenorum, an. ℥ iiij.
Coquantur ex arte in ſeri lactis vaccini ℔ *xij. In decocto percolato, & calido infunde ſuper calidos Cineres per horas* 24.

Mirobalanorum Citrinorum,
Chebularum,
Indorum contuſ.
Seminis Violarum contuſ.
Coloquintidis minutim inciſ.
Agarici contuſ. &
Foliorum Sennæ mundat. an. ℥ ij
Foliorum Abſinthii, &
Thymi, an. ℥ j.
Roſarum Rubrarum,
Seminis Aniſi, &
Feniculi, an. ℥ vj.
Bulliant deinde lento igne per ſemihoram; & ſemirefrigerata, manibus diligenter fricentur, colentur & fortiter exprimentur; Colaturæ adde ſucci Fumariæ depurati ℔ *ij. Sacchari & Mellis Norbonnenſis an.* ℔ *iij. & coque ad Electuarii mollis conſiſtentiam. His refrigeratis adde,*

Pulparum Caſſiæ,
Tamarindorum &
Mannæ electi, an. ℥ iiij.
Illiſque tandem permiſce Pulveres ſequentes.

℞. *Rhei Electi,*
Agarici albiſſimi,
Foliorum Sennæ mundatorum, &
Diagrydii, an. ℥ ſs.
Myrobalanorum Citrinorum,
Indorum,
Emblicorum, &
Bellericorum,
Epithymi, &
Seminis Fumariæ, an. ℥ j.
Cinnamomi,
Gingib. &
Seminis Aniſi, an. ℥ iij.

Confection of Hamech Corrected.

℞. Polypody of the Oak, bruis'd,
Raiſons ſton'd, and
Damask Prunes, *an.* ℥ iiij.
Boyl them in an Earthen-Pot, in twelve pints of Whey made of Cows-milk. In the ſtrain'd and hot Decoction infuſe over the warm Embers for 24 hours,
Of Mirobalans yellow,
Chebula,
Indian bruis'd,
Violet-ſeed bruis'd,
Coloquintida ſhred ſmall,
Agaric bruis'd,
Leaves of Senna cleans'd, *an.* ℥ ij.
Leaves of Wormwood, and
Thyme, *an.* ℥ j.
Red-Roſes,
Aniſe-ſeed, and
Fennel-ſeed, *an.* ℥ vj.
Let them boyl over a ſoft Fire for half an hour; and being half cold, rub them well between your hands, then ſtrain and preſs them out hard. To the ſtraining add ℔ ij. of clarifi'd Juice of Fumitory, of Sugar and Honey of Narbon, *an.* ℔ iij. and boyl them to the conſiſtence of a ſoft Electuary. To theſe when they are half cold, add
Pulps of Caſſia,
Tamarinds, and
Choice Manna, *an.* ℥ iiij.
To all which, laſtly, add the following Powders.

℞. Pickt Rhubarb,
Whiteſt Agaric,
Leaves of Senna cleans'd,
Diagrydion, *an.*
Mirobalans yellow,
Indian,
Emblic, and
Belleric,
Epithyme, and
Seed of Fumitory, *an.*
Cinnamon,
Ginger, and
Aniſe-ſeed, *an.* ℥ iij.

The diverſity of Receipts, the ill-proportion'd Quantities, the ill Method which the Ancients preſcrib'd for this Compoſition, have a long time troubl'd the minds of the Apothecaries, eſpecially thoſe who believing it a Crime not to follow punctually the Traditions of their Anceſtors, durſt not make uſe of Underſtanding Phyſitians, who were able to preſcribe any thing more juſt. For they might well believe, that a great number of Drugs, of a various ſubſtance and quality, requir'd diverſity of Infuſion, and boiling; and that various means and different times were to be made uſe of, to extract and impart their vertues to the Confection. They might alſo have conſider'd, that it was impoſſible to continue an Infuſion of Medicaments in Whey for five days, but that it muſt grow ſowre, and receive a notable alteration. But they that will ſtick to this Receipt, and carefully obſerve the directions for preparation, will find that there is no Ingredient but what is good, and well proportion'd; and that the vertue of every one in particular, will not fail to ſhew it ſelf in the Entire Compoſition.

Confectio Hamech purges Flegm, and both ſorts of Choler, particularly ſalt and ſharp Humours: For which reaſon it is preſcrib'd for the cure of Scurfs, Itches, Ereſipela's, Cankers, and corroding Ulcers; as alſo for ſcald Heads, and other Diſeaſes caus'd by ſharp and burning Humours. It is good againſt the Worms; as alſo in Venereal Diſtempers, and Quartan Agues. Tne exceſſive bitterneſs, is the reaſon that it is rather giv'n in Bolus, then diſſolv'd in Liquors. The Doſe is from a dram to half an ounce, and ſometimes an ounce for ſtrong Conſtitutions.

Hiera Picra *Galeni.*

℞. *Cinnamomi Elect.*
Maſtiches,
Aſari,
Santali Citrini,
Croci, an. ℥ *vj.*
Aloes Succotrinæ, ℥ *xij* ß.
Mellis deſpumat. & cocti, ℔ *v* ℥ *viij.*

Galen's *Hiera Picra.*

℞. Choice Cinnamon,
Maſtich,
Aſarobacca,
Yellow Saunders,
Saffron, *an.* ℥ vj.
Aloes Succotrine, ℥ xij. ß.
Honey deſpumated and boil'd, ℔ v. ℥ viij.

The high value which *Galen* put upon this Compoſition, and its extraordinary bitter taſte, caus'd him to give it the Name of *Hiera Picra*, or *Holy Bitter*. You may either keep the Powder apart, or mix it with Honey, and reduce it to an Electuary.

Bruiſe the Saunders, Aſarabacca, Cinnamon, and Spikenard, cleans'd and cut in a large Braſs-Mortar, and ſift them through a Silk-ſieve. Beat the Saffron apart, having firſt dry'd it in a Paper before the fire: Beat the Aloes in a great Mortar, mixing with it ſome few drops of Oyl of ſweet Almonds: Afterwards mix the Powders together, and incorporate them with the Honey moderately hot, and put it up when it is cold.

Some uſe but three times the weight of the Powders in Honey: But Experience tells us, that the dryneſs of the Powders requires more; beſides, that the Honey qualifies the exceſs of the bitterneſs of the Compoſition.

This *Hiera* is very proper to looſen thick and viſcous humours from the Stomach; to open the obſtructions of the Liver, Spleen, Pancreas, and Meſentery: It keeps the Belly free, cauſes the Hæmorrhoids to flow, provokes the Terms of Women, diſſipates the vapours of the Matrix, and cleanſes the impurities thereof. The doſe is from half a dram to two drams: It is tak'n rather in Bolus, then diſſolv'd in Liquors, by reaſon of its bitterneſs: It is us'd in Wind-expelling and Hyſteric Glyſters, from half an ounce to an ounce; and ſometimes put into Suppoſitories, to render them more effectual.

Hiera Diacolocynthidos.

℞. *Colocynthidos mundat.*
Agarici Elect.
Stœchados Arabicæ,
Marrubii Abbi,
Chamædryos, an. ℥ *x.*
Opoponax,

Hiera of Coloquinth.

℞. Coloquinth cleans'd,
Choice Agaric,
Arabian Caſſidony,
White Harehound,
Germander, *an.* ℥ x.
Opoponax,
Sagapen,

Sagapen,	Sagapen,
Seminis Petroſelini,	Stone-Parſley-ſeed,
Radicis Ariſtolochiæ rotundæ,	Root of round Birth-wort,
Piperis Albi, an. ℥ *v.*	White Pepper, *an.* ℥ v.
Cinnamomi,	Cinnamon,
Spicæ Nardi,	Spikenard,
Myrrhæ,	Myrrh,
Folii Indi,	Indian-leaf,
Croci, an. ℥ ß.	Saffron, *an.* ℥ ß.
Mellis deſpumati & cocti, ℔ *iiij.*	Honey deſpumated and boil'd, ℔ iiij.

This *Hiera* takes its Name from the Coloquinth, which is the principal purging Ingredient, whoſe vertue is augmented by that of the Agaric, Opoponax, Sagapen, and Myrrh. The other Ingredients are put in chiefly to expel Wind, open Obſtructions, and fortifie the parts againſt the violence of the Purgatives.

In the Compoſition of this *Hiera*, the Ancients are no more to be follow'd, then in that of Treacle; I mean, as to the diſſolution of Opoponax and Sagapen in Wine, for the reaſons already alledged: Nor is it neceſſary to reduce the Agaric or Coloquinth into Trochiſques, under pretence of Correctives, of which there are enough in this Compoſition. It will be ſufficient to beat and paſs them among the other Ingredients through a Silk-ſieve, beginning the Powder with the Birth-wort and Spikenard, which may be beaten ſometime together, adding ſome part of the Gums; proceeding next with the Cinnamon, the Pulp of Coloquinth cut, the Agaric, adding to them alſo ſome part of the Gums, and then all the reſt of the Drugs, and the remainder of the Gums. Beat them all into a very fine Powder, becauſe of the Coloquinth, which would ſtick to the Stomach or Bowels if it were too big. The Powders muſt be incorporated with the warm Honey, as before.

There are great vertues attributed to this *Hiera*, of which the chief are to cure Epileptics, Mad-men, and thoſe that are troubl'd with Vertigo's, and continual diſeaſes of the Head. It is accounted an Excellent Remedy againſt Aſthma's, Pleuriſies, and for thoſe that have loſt their Voice: But there is ſome probability of its being too hot to be us'd in theſe diſtempers, unleſs their cauſes be judiciouſly conſider'd. It is alſo made uſe of in Convulſions and Lethargies, to diſſipate the pains of the Joynts and Kidneys, and thoſe that are caus'd by Rheumatiſmes, and the Gout; to aſſwage pains of the Stomach, and qualifie the ſowrneſs that ingender there; to looſen and carry off melancholy humours, and to eaſe the pains of the Inteſtines and Matrix, caus'd by Slimy and tartarous humours. The doſe, and manner of taking, are like thoſe of *Hiera Picra*, as well to be tak'n inwardly, as to be diſſolv'd in Glyſters.

Electuarium de Pſyllio Correctum.

℞. *Polypodii quercini contuſ.* ℔ ß.
Paſſularum Damaſcenarum purgatarum,
Foliorum Sennæ Orientalis mundatorum, &
Seminis Violarum contuſ. an. ℥ *iij.*
Epithymi, &
Tartari Albi Monſpelienſis contuſi, an. ℥ *ij.*

Coquantur in ſuccorum depuratorum Apii,
Borraginis,
Bugloſſi,
Endiviæ, &
Fumitariæ, an. ℔ *ij* ß.
Deinde colentur & exprimantur:
In majori parte colaturæ infundantur,
Seminis Pſyllii integri ℥ *iij. & ex illis extrahatur ex arte Muſcilago, & ſervetur,*
Reliqua Decocti parte humectentur,

Electuary of Flea-wort Corrected.

℞. Polypody of the Oak bruis'd, ℔ ß.
The faireſt Raiſins of the Sun ſton'd,
Leaves of Oriental Senna cleans'd, and
Seed of Violets bruis'd, *an.* ℥ iij.
Epithyme,
White Tartar of *Montpelier* bruis'd, *an.* ℥ *ij.*
Boil them in the clarifi'd Juices of Parſley,
Borrage,
Bugloſs,
Endive, and
Fumitory, *an.* ℔ ij ß.
Then ſtrain and preſs them:
In the greater part of the ſtraining infuſe
Of Flea-wort-ſeed whole ℥ iij. and out of theſe extract a Muſcilage, and ſet it aſide,
With the other part of the Decoction moiſten,

Tamerindorum

Tamarindorum Oriental. ℥ x. *& Medulla librarum duarum Caſſiæ Orientalis, quorum pulpa extrahatur & igne lento inſpiſſetur, ita ut uniuſcujuſque pulpæ inſpiſſatæ* ℥ vij. *ſuperſint.*

Servato vero Mucilago cum Sacchari opt. ℔ iiij. *igne lento ad Electuarii mollis conſiſtentiam coquatur, ſemique refrigeratis Pulpæ & Pulvis ſequens permiſceantur.*

℞. *Diagrydii elect,* ℥ iiij.
Rhabarbari opt. &
Seminis Violarum, an. ℥ ij.
Roſarum Rubrarum,
Liquiritiæ mundat.
Santali Citrini, &
Raſuræ Eboris, an. ℥ j.
Sem. quat. frig. maj. mund.
Aniſi,
Fœniculi, &
Papaveris Albi, an. ℥ ij.

Of Oriental Tamarinds ℥ x. and the pulp of two pound of Caſſia Oriental; the pulp of which is to be drawn out, and thick'nd with a ſlow Fire, ſo that of each pulp thus thickn'd ℥ vij. may remain.

Let the reſerv'd Mucilage be boil'd to the conſiſtence of a ſoft Electuary, over a ſoft Fire, with ℔ iiij. of the beſt Sugar, and when they are half cold, add the Pulp and Powder following.

℞. Choice Diagrydium, ℥ iiij.
Rhubard choice, and
Violet-ſeeds, *an.* ℥ ij.
Red-Roſes,
Cleans'd Liquorice,
Yellow Sanders, and
Shavings of Ivory, *an.* ℥ j.
The four greater cold Seeds cleans'd,
Seeds of Aniſe,
Fennel, and
White Poppy, *an.* ℥ ij.

Electuary of *Flea-wort* is not mention'd in all Diſpenſatories, but thoſe Deſcriptions which we meet with are very unlike, confus'd, irregular, ill proportion'd and intricate, ſome being ſwell'd with four Compoſitions of Troquiſhes to no purpoſe. Which oblig'd Monſieur the Kings firſt Phyſitian to preſcribe and order this for the public good.

Firſt, boyl the Tartar and Polypody well bruis'd in the clarifi'd Juices for an hour; afterwards the Raiſins cut and Violet ſeeds bruis'd, a quarter of an hour, then boyl the Epithyme and Senna, for a quarter of an hour longer among all the reſt. That done, infuſe the Flea-wort ſeed in about two thirds of that Liquor four or five hours over a very ſoft Fire in a glaz'd Earthen Pipkin, ſtirring it often with a Wooden Spatula, the better to draw forth the Mucilages, and when they are ſufficiently thick, ſtrain them through a ſtrong Cloth, and preſs out the Sediment. Moiſten the Pulp of Tamarinds and Caſſia preſcrib'd with the reſt of the Decoction, and having beaten them in a Marble Mortar, paſs them through a hair Sieve, to get the Pulps, which after you have mingl'd together, ſet them over a gentle Fire, and evaporate their ſuperfluous moiſture, ſtirring them often with a Spatula till they are ſufficiently thick'nd. Then boyl the Mucilages and Sugar preſcrib'd to the conſiſtence mention'd. But look well to the viſcous ſubſtance of the Mucilages, which will make you think the Sugar is boyl'd enough when it is not: Yet have a care of boyling it too much, leſt you loſe the lubricity of the Mucilages.

The preparation of the Powder is the ſame as before.

This Electuary is very proper to purge Choleric and Serous Humours: It is profitable in all ſorts of Agues, againſt Diſeaſes of the Head, and Vertigo's proceeding from Choleric Humours; It helps againſt the Jaundice, and all Diſeaſes of the Liver and Spleen: It is to be taken as other Laxative Electuaries: but the Doſe is leſs, *viz.* from a dram to half an ounce, becauſe of the larger quantity of the Scammony.

Electuarium Anti-hydropicum D. D. D' *AQUIN.*

℞. *Rhabarbari elect.*
Foliorum Sennæ oriental. mundatorum,
Seminis Geniſtæ,
Radicum Brioniæ,
Jalopæ,
Mechoacan,
Scammonii,
Gummi Guttæ, &

An Electuary againſt the Dropſie, of Monſieur D' AQUIN.

℞. Choice Rhubarb,
Leaves of Oriental Senna cleans'd,
Broom-ſeed,
Roots of Briony,
Jalap,
Mechoacan,
Scammony,
Gum Guttæ, or, Gutta Gamba, and
Trochiſcorum

Trochiſcorum Alhandal, an.	℥ j.
Extracti totius Eſulæ,	
Opopanacis,	
Sagapeni,	
Ammoniaci, &	
Salis Martis, an.	℥ vj.
Elaterii,	℥ ß.
Succorum Radicis Ireos noſtratis, &	
Radicis Sambuci ad extracti mollioris conſiſtentiam inſpiſſatorum, an.	℔ j.
Extracti mollioris granorum Juniperi, &	
Syrupi de Rhamno Cathartico, an.	℔ j ß.

Trochisks of Alhandal, *an.*	℥ j.
Extract of the whole Spurge,	
Opopanax,	
Sagapen,	
Ammoniac,	
Salt of Steel, *an.*	℥ vj.
Elaterium,	℥ ß.
Juices of the Root of *French* Orrice, and	
Root of Elder thick'nd, to the conſiſtence of a ſoft Extract, *an.*	℔ j.
Soft Extract of Juniper-Berries, and	
Syrup of Purging-Thorn, *an.*	℔ j ß.

Evaporate the Juices of the Roots of Orrice and Elder over a ſoft fire, to the conſiſtence mention'd: Pulverize in a large Braſs-Mortar the Rhubarb, Jalap, Mechoacan, Briony, Broomſeed, Trochisks of Alhandal, Senna, and the Gums all together; all but the Scammony, and *Gutta-gamba*, which muſt be pulveriz'd apart; and having mix'd all the Powders together, and added to them the Salt of Steel, moderately the Syrup of purging Thorn; then incorporate, firſt by degrees, the Juices and Extracts thick'nd, and after that the Powders, as before directed for ſoft Electuaries.

They that underſtand the particular vertues of the ingredients of this Electuary, cannot but acknowledge that they are all judiciouſly choſen, and that they muſt be very effectual for the purpoſes for which this Electuary is deſign'd, which are for the cure of the Dropſie, and particularly that which is call'd *Aſcites*, when the water is got between the Fleſh and the Skin, where it will not fail to ſucceed, provided the Liver and Spleen, and other principal Bowels, are not too much corrupted; and that the Patient ſtick cloſe to the Remedy. The doſe of this Electuary is from one dram to half an Ounce: It may be diſſolv'd in White-wine, or ſome opening Liquor, but the beſt way is to take it in Bolus, by reaſon of its bitterneſs.

Electuarium Diacarthami.

℞. *Medullæ ſeminis Carthami,*	
Pulveris Diatragacanthi frigidi,	
Hermodactylorum, &	
Diagrydii, an.	℥ j.
Turbith Electi,	℥ j ß.
Zinziberis,	℥ ß.
Mannæ granuloſæ,	℥ ij ß.
Mellis Roſati colati, &	
Carnis Cydoniorum conditæ, an.	℥ ij.
Sacchari ſolidi in aqua ſoluti, & in Electuarium ſolidum cocti,	℥ xx ij.

Electuary of Baſtard-Saffron.

℞. The Pulp of Carthamus-ſeed,	
Powder of cold Diatragacanthum,	
Hermodactyls, and	
Diagrydion, *an.*	℥ j.
Choice Turbith,	℥ j ß.
Ginger,	℥ ß.
Manna in Grains,	℥ ij ß.
Honey of Roſes ſtrain'd, and	
The condited ſubſtance of Quinces, *an.*	℥ ij.
Sugar diſſolv'd in water, and boil'd to the conſiſtence of a ſolid Electuary,	℥ xx ij.

This Receipt of *Diacarthanum* is ſomewhat different from thoſe which are to be found in many Diſpenſatories; ſometimes under the Name of *Arnoldus de Villa Nova*, *Nicholas* the *Florentine*, and ſometimes without a Name; in ſome there is Sugar-Candy, but leſs Manna, leſs Scammony, and leſs fine Sugar; in others, no Sugar-Candy, but more Scammony, more Manna, and Sugar; in others, more Powder of Diatragacanth, leſs Carthamus-ſeed, leſs Ginger, and *Mel Roſatum*. Therefore I have here produc'd a Receipt, wherein the Sugar-Candy is omitted as uſeleſs, and the quantity of the Manna augmented, as alſo in ſome ſmall meaſure that of the Sugar, to ſupply the defect of the Sugar-Candy, and to keep a due proportion with the Scammony, and other Ingredients.

Neither what Holy Writ delivers to us concerning *Manna*, white, ſweet, and like Coriander-ſeed, which God rain'd down from Heaven to feed the *Iſraelites*, nor what we have ſpoken other-where of a certain ſort of *Manna*, which being rais'd in Summer from the vapours of the Earth, and digeſted in the Air, is condens'd by the cold,

cold, and ſhews it ſelf in certain hot Countries, before Sun-riſe, upon Plants, Trees, Rocks, and upon the Earth it ſelf, as in ſome parts of *Provence* and *Languedock*, and melts and diſappears when heated by the Rays of the Sun, cannot convince me to be of the Opinion of thoſe, who would have the Manna which we make uſe of, to be a Honey of the Air, or a kind of Dew, ſince Reaſon and Experience teſtifie the contrary.

For if Manna were a Dew rais'd from the vapours of the Earth, and condens'd by the Cold, as they aſſure us, it would certainly melt, and be diſſipated by heat, which our Manna does not, but rather condenſes and dries in the Sun. Moreover, it would be certainly found upon all Plants, Trees, Rocks and Earths where-ever it were exhal'd, whereas it is only found upon the ordinary Aſh, call'd in Latine, *Fraxinus*; and upon the wild Aſh, in Latine, *Ornus*; and upon ſome of thoſe Trees but very little, upon others none at all. Nor ſhould we meet with ſuch large Tears, nor ſo long, and ſome that ſhew the very print of the leaf upon which they grew. Nor ſhould we find the leaves of Aſh ſo often mix'd with it; nor could we keep it whole years together, as we often do upon occaſion.

As little prevails with me what ſundry Greek, Arabian, and Modern Authors have written, that the Manna which is brought to us in ſuch quantities, grows in the Kingdom of *Naples*, and particularly in *Calabria*; and that it is a white, ſweet juice or liquor, condens'd by the Beams of the Sun, and diſtils either voluntarily, or by Inciſion from the branches, boughs, and very leaves alſo of common and wild Aſhes, before and during the Dog-days. And that the other Manna, leſs plentiful, grows about *Brianſon* in the upper *Dauphinate*, diſtilling from the Trees of that Country; that both the one and the other Manna ceaſes not to diſtil, though you cover the Boughs with Linnen, or any other ſtuff: And that if Manna were a Honey of the Air or Dew, it were impoſſible to gather it, or to keep it without melting or diſſipating, nor to gather it in the heat of the Sun, as they do that Manna which is brought to us: For all Manna of the Air that appears in the morning condens'd by the cold, vaniſhes when it feels the heat of the Sun.

Alcomarus, a Neapolitan Phyſitian, well inſighted into theſe truths, has wrote largely and very much to the purpoſe upon this Subject, in a Treatiſe which he printed in the year 1561. whoſe Reaſons are maintain'd by *Coſtæus* in his Commentaries upon *Meſue*.

Joſeph Donzellus, a Neopolitan Phyſitian likewiſe, in his *Pharmacopeutical Theatre*, printed at *Naples* in the year 1667. confirms what *Alcomarus* has wrote before him, when he tells us, that Manna is a juice which diſtils from the Aſh, condens'd by the heat and benign temper of the Air, and that it ought to be rank'd in the number of Gums that diſtil from Trees, diſſolve in moiſture, and coagulate with heat, being far different from the Arabian Manna, which is only a Dew that melts with heat: And deſcribing that Manna that grows in *Calabria*, which is that which we every day make uſe of; and diſcourſing with *Battiſta Ferrarius*, a Phyſitian of the Country, he ſpeaks that which I thought fit here to Epitomize.

There are three ſorts of Manna in *Calabria*; the firſt call'd *Manna di Corpo*, the ſecond *Manna Forzata*, or *Forzatella*, and the third *Manna di Fronda*. Theſe Manna's are no Dews, but a juice that diſtils from the common Aſhes, call'd *Fraxini*, or the wild ones call'd *Orni*; theſe Manna's are gather'd in a hot ſettl'd ſeaſon, when no Rain falls; and they begin to diſtil when the Sun enters into *Cancer*, which is about the twenty firſt of *June*. The firſt and faireſt Manna iſſues forth voluntarily, from the body or biggeſt branches of the Tree, in a Chryſtalline liquor, forming it ſelf into Tears bigger or leſſer, as the part of the Tree is more or leſs full of it. They are careful to gather this Manna the next day after it is diſtill'd forth; for in that time it hardens by little and little, and becomes white; but if it ſhould rain in the night, or any Miſts ſhould riſe, it would melt and come to nothing. They begin to take it off from the bark of the Tree with a thin-pointed knife by Sun-riſe, putting it, as they gather it, into glaz'd Earthen-pots; then ſpreading it upon white paper, they expoſe it to the Sun, till it ceaſe to ſtick to the fingers, leaſt the Manna ſhould diſſolve by the means of any ſuperfluous moiſture, and loſe its whiteneſs. This gathering continues from the twenty firſt of *June*, till the latter end of *July*.

The ſecond call'd *Forzata*, or *forc'd*, is drawn forth in the Month of *Auguſt*, when the firſt Manna ceaſes to flow voluntarily; for the Country-people wound the bark of the Trunks, to the wood it ſelf, with very ſharp Inſtruments; and ſo from Noon, till ten a Clock at Night, you ſhall ſee the Manna flow from thoſe wounds, ſo that you ſhall ſometimes ſee it clotted together at the bottom of the Tree like little ſticks of Wax: They never gather it till the next day after Inciſion. This is not ſo well eſteem'd, as being

being more yellow then the first, and apt to turn brown, being kept any time, though nothing less purgative.

The third is call'd *Manna di Fronda*, or *of the Leaves*, flowing voluntarily from the leaves of the Ash like little drops of water, as appears like a kind of sweat upon the nervous part of the Leaf, during the heat of the day, and extends it self all over the Leaf, though the drops are bigger at the stalk, then at the end, or point. These drops harden, and become white in the Sun, and are somewhat bigger then Grains of Wheat. In *August* the great leaves of the Ash will be so loaden with these drops, as if they were cover'd with Snow: They do not labour so much to gather this Manna, because of the difficulty to separate it from the Leaves, though it be no less purgative then the other.

These Truths are confirm'd also by Mr. *John Ray*, of the Royal Society of *London*, in his Catalogue of English Plants, printed at *London* in the year 1670.

Besides all these, Mounsieur *Nicholas Marchand*, a Member of the Royal Academy of Sciences, Herbalist to the King, and Director of the Plantation of the Garden-Royal, has confirm'd all these things to me, as one that has been an Eye-witness, to the end I might be able to speak with more assurance. I have also understood the same thing from several other persons who have liv'd several years in *Calabria*, that there is no reason in the world to question it.

The Diagrydion must be bruis'd apart, mixing some of the Carthamus-seeds with it, and pass'd through a Silk-sieve. The Turbith, Hermodactils, Ginger, and the rest of the Carthamus, must be beaten together in a large Brass-Mortar; and being pass'd through a Silk-sieve, must be mingl'd with the Diagrydion and Diatragacanth newly prepar'd. Beat the condited substance of the Quinces in a Marble-Mortar with a Wooden-pestle; and having pass'd it through a Hair-sieve revers'd, mix it with the *Mel-Rosatum*, and Manna; then having dissolv'd the Sugar in six ounces of water, and boil'd it to the consistency mention'd, put the Honey, the Pulp of Quinces, and the Manna into it; and having giv'n them a soft boiling, to evaporate the superfluous moisture of the Honey of Roses, and Quinces, take them off the fire, and stir the whole with a Wooden-pestle; and when it begins to coagulate, mingle the powders as exactly as you can; and when all is incorporated, take out the Pestle: Then having separated the Mass in the Bason, take it in your hands, oyl'd before with Oyl of Sweet-Almonds, and spread it upon a sheet of white paper a little oyl'd, and make a kind of a Cake about half the thickness of your little finger, which you shall cut into Tablets of half an ounce a-piece; and when they are cold, put them up in a Box.

These Tablets are proper to purge Flegm, and a yellow Choler; for which reason they are useful in Diseases that proceed from the abundance of those humours; as Palsies, Epilepsies, and most Diseases of the Brain; Rhumatisms, Gouts, and Quotidian Agues. They are to be taken in distill'd waters, or proper Decoctions. They may be also made up in Bolus, or eaten alone, or mingl'd with purgative Syrups. When they are given alone, the Dose is from two drams to six.

You may keep apart the Powder of this Electuary, and give it from half a dram to a dram, or a dram and a half.

Electuarium de Citro Solutivum.

℞. *Foliorum Sennæ Orientalis mundatorum,* ℥vj.
Turbith electi, ℥v.
Corticis Citri Saccharo conditi,
Conservæ florum Bugloſſi, & Violarum,
Pulveris Diatragacanthi frig. &
Diagrydii, an. ℥ß.
Seminis Feniculi dulcis, ℥ij.
Zinziberis, ℥ß.
Sacchari opt. in aqua Bugloſſi ſoluti, & in Electuarium ſolidum cocti, ℥ix.

Solutive Electuary of Citron.

℞. Leaves of Oriental Senna cleans'd, ℥vj.
Choice Turbith, ℥v.
Citron-rind condited with Sugar,
Conserve of Flowers of Bugloss, and Violets,
Powder of cold Diatragacanth,
Diagrydion, *an.* ℥ß.
Sweet Fennel-seed, ℥ij.
Ginger, ℥ß.
Fine Sugar dissolv'd in Borage-water, and boil'd to a solid Electuary, ℥ix.

This Electuary bears the name of Citron-rind condited, though it afford it no purgative vertue, and only ſerves to ſtrengthen the Stomach, and the Noble parts, during the Operation of the purgers. The Preſcription differs in ſeveral Diſpenſatories; but this is approv'd as well by *Du Rencri*, and the Compilers of the *Pharmacopœa Londinenſis*, ſo that I thought it not convenient to alter it.

This Electuary may paſs for an Univerſal Purger, for it purges flegm, and alſo both cholers, ſtrengthening the parts withal: the Purgatives are ſufficiently corrected, ſo that this Electuary is often given in Tertians, and half Tertians; to cleanſe the Stomach from its impurities, to diſcharge the Hypochondriums, reſtore the Appetite, and a good habit of body, and to fortifie the bowels. The manner of taking and doſe of this Electuary are very near alike.

Electuarium de Succo Violarum.		*Electuary of Juice of Violets.*	
℞. *Seminis Violarum, &*		℞. Violet-ſeeds, and	
Diagrydii, an.	ʒj.	Diagrydion, *an.*	ʒj.
Liquoritiæ & Roſarum Rubrarum, an.	ʒß.	Liquorice and Red-roſes, *an.*	ʒ ß.
Seminum quat. frig. maj. mundatorum, an.	ʒ ß.	The four greater cold ſeeds, *an.*	ʒ ß.
Succi recentis Violarum,	ʒix.	New juice of Violets,	ʒ ix.
Sacchari optimi,	℔ j ß.	Fineſt Sugar,	℔ j ß.

Pulverize the Violets, Liquorice, Red-roſes, cold Seeds, and Diagrydion, as before: Diſſolve the Sugar groſly powder'd in a Copper-Skillet tinn'd within, in nine ounces of Juice of Violets newly preſs'd out, and boil them together over a ſoft fire to the conſiſtence of a ſolid Electuary: Then take the Poſnet from the fire, gently ſtirring the Sugar, till it begins to coagulate; at which time incorporate the Powders with all the care and exactneſs that may be.

This Electuary is chiefly to purge ſuch perſons as have a nice and tender Breaſt, and ſubject to Inflammation. It is alſo proper for thoſe whoſe Liver and Entrails are heated: For the Juice of Violets, aſſiſted by the oylineſs of the Seeds, qualifies the Acrimony and ſharpneſs of the Diagrydion, and prevents it from heating the parts, while it carries away the ill humours: The doſe and manner of taking, is much the ſame with that of *Diacarthamum*.

Electuarium de Succo Roſarum.		*Electuary of Juice of Roſes.*	
℞. *Succi Roſarum depurati & Sacchari opt. an.*	℔ j ß.	℞. Juice of Roſes clarifi'd, and the fineſt Sugar, *an.*	℔ j ß.
Coquantur igne moderato in Electuarium ſolidum, cui ſemi-refrigerato permiſce pulverem ſequentem.		Boil them over a gentle fire to a ſolid Electuary; and when they are half cold, mingle the following Powder therewith.	
℞. *Scammonii Elect.*	ʒix.	℞. Choſen Scammony,	ʒix.
Trium Santalorum, &		The three Sanders,	
Maſtiches, an.	ʒiij.	Maſtich, *an.*	ʒ iij.
Subtiliter pulverizentur & Sacchaxo ex Arte permiſceantur.		Beat them to a very fine powder, and mix them according to Art.	

The Preſcription of this Electuary differs as much in moſt Electuaries as that of *Diacarthamum*; for ſome augment the Saunders, others the Scammony; others abate the Juice of Roſes, others put in Spodium inſtead of Maſtich, others preſcribe Camphire, and every one pretends to Reaſon; but not to blame others, I believe this not to be inferiour to any of them.

You muſt be careful to have your Juice of Roſes perfectly well clarifi'd; and having boil'd it as directed, take it from the fire, and ſtir it gently with a wooden-peſtle till it begin to coagulate, at what time mix the Powders, as before.

This

This Electuary is chiefly recommended to purge cholerick humours; but that hinders not but that it may also purge other humours that may be mingled therewith. The dose and manner of taking this Electuary is the same with those of the precedent Electuaries.

I could have swell'd this Chapter with a great many more Electuaries, with which Dispensatories are full cramm'd. But believing that the instructions which I have giv'n may serve as a sufficient rule whereby to undertake and accomplish any other that may be prescrib'd, I thought fit to forbear, leaving every one to prepare such remedies, and to follow such directions as he likes best.

I might have added a Chapter of Junkets or Sweet-meets, call'd in Latin *Tragemata*, or *Bellaria*; but their consistence is almost the same with solid Electuaries, as also their foundation, which is Sugar. But because they are not much us'd in Physic and may be prepar'd at any time with proper Powders, Sugar, and Mucilages of Gum-Tragacanth, I am unwilling to enlarge too far.

CHAP. XXI.

Of Trochisks.

IN imitation of the Greeks, all those who have written of Pharmacy, have giv'n the name of Trochisks to a dry Composition, the chief Ingredients whereof are usually reduc'd to a fine powder, then being incorporated with some liquor, are made into a mass, of which are form'd certain small Cakes, to which you may give what Figure you please, being then to be dry'd out of the Sun, or at distance from the Fire. However you may add several pulps and viscous matters to the composition of Trochisks, but there is no reducing those substances into a mass, or to the shape and driness of Trochisks, unless you mix powders very finely beaten among them. They are also call'd Pastils, Rolls, Cakes, and Lozenges. Trochisks were invented, as well to preserve a long time the virtue of certain Medicaments, as to unite together the vertue of several. To which purpose having finely powder'd the Ingredients which are to be powder'd, they are to be incorporated with some juice, syrup, or other viscous Liquor, to make thereof a solid paste, out of which are form'd little Trochisks, flat, round, triangular, square, long or otherwise; which being spread upon paper, and dry'd out of the Sun, and at a distance from the Fire, to the end they may be dry'd in all parts alike, may be put up in Boxes or Pots for use.

Formerly a great number of Trochisks were prepar'd, as appears by the ancient Dispensatories which are full of them. But because the Moderns have rejected so great a number, we thought it convenient to satisfie our selves with those which are only in use.

Trochisks are prepar'd for several purposes, some to close and bind, some to fortifie the parts, some to cut and purge, some to cleanse and incrassate; whence it comes to pass that they are prescrib'd in all Diseases of the Breast and Lungs. Others for Diseases of the Eyes, and were call'd *Sief* by the Arabians. Others which are particularly call'd by the name of *Pastils*, were invented for Perfumes, which are usually compos'd of odoriferous Gums, mix'd with Woods, or other Aromatic Drugs pulveriz'd and incorporated with Mucilages of Gum-Tragacanth.

Trochisci de Agarico.	*Trochisks of Agaric.*
℞. *Zinziberis albi contus.* ʒ ij.	℞. White Ginger bruis'd, ʒ ij.
Vini albi, ʒ iiij.	White-Wine, ʒ iiij.
Infundantur frigide horis viginti quatuor, & colentur: postmodum,	Let them infuse cold for twenty four hours, then strain them: afterwards.
℞. *Agarici electi in pulverem redacti,* ℔ ß.	℞. Choice Agaric reduc'd into Powder, ℔ ß.
Prædicto liquore humectetur & ex illa fingantur Trochisci in umbra siccandi.	Moisten it with the foresaid Liquor, and make of it Trochisks to be dry'd in the shade.

To prepare theſe Trochisks right and to have them white, you muſt ſtay for fair warm and dry weather, and be careful to pick your Agaric very clean and very white through all its ſubſtance, very light and very brittle, & to reduce it into powder with a very ſmall Raſp: In the mean while infuſe coldly two drams of white Ginger, very well cleans'd from its Bark, and well bruis'd, for four and twenty hours in four ounces of white Wine; then having ſtrain'd the Infuſion, moiſten the Powder of Agaric with the Infuſion, and beating them together in a Marble-Mortar with a wooden-Peſtle, reduce it into a ſolid maſs; and make of it little Trochisks, which you muſt ſpread upon white paper in a hair-Sieve revers'd, and dry in the ſhade in the open Air.

They that undertake to prepare theſe Trochisks right, fail in the preparation; for inſtead of preſerving their white colour, they ſo order it that they are of a very dark colour, which happens either becauſe their Agaric is not well choſen, or becauſe the Ginger was infus'd warm, or becauſe the paſte was too moiſt, or becauſe the Trochisks were expos'd to the Sun or Fire.

Some there are that add to theſe Trochisks, *Sal gemmæ* as an incentive, and Ginger in ſubſtance as a corrective; and make uſe of ſimple Oxymel inſtead of an Infuſion of Ginger to reduce Agaric into paſte. This preparation might be admitted, if you could preſerve the white colour of the Agaric, which is very much to be regarded.

The principal uſe of Trochisks of Agaric, is to purge Phlegme, though at the ſame time they alſo purge other humours, when they are mix'd with it. They cut and looſen viſcous and tenacious humours, and open obſtructions of all the Bowels. They are preſcrib'd to carry off old pains in the Head, to heal diſtempers in the Eyes, Ears and Teeth; to cleanſe the Stomach, Reins, Liver, Spleen and Matrix; to kill Worms and to eaſe the pains of Aſthmaticks, and thoſe whoſe viſcous matters ſtop the Conduits of Reſpiration. Their doſe is from one ſcruple to a dram. They are ſeldom giv'n alone, being more frequently preſcrib'd in infuſion then in ſubſtance; unleſs when they are to be put into Pills or Opiates, or other ſuck-like Compoſitions.

Trochiſci Alhandal.

℞. *Pulpæ Colocynthidis electæ & mundatæ quantum libuerit, forcipe minutim incide, guttis aliquot Olei Amygdalarum dulcium irrora & in ſubtilem pulverem redige. Ex pulvere Mucilagine Gummi Tragacanthi excepto fac Maſſam, ex Maſſa Trochiſcos in umbra ſiccandos. Siccos iterum ſubtiliter tere, nova Gummi Tragacanthi mucilagine excipe, novos Trochiſcos finge in umbrâ ſicca & ad uſum ſerva.*

Alhandal Trochisks.

℞. The choiceſt pulp of Coloquintida, cleans'd as much as is fit, cut it very ſmall with a pair of Sciſſers, moiſten it with ſome few drops of Oyl of ſweet Almonds and reduce it into fine powder. Of the powder make a Maſs with Mucilage of Gum-Tragacanth, of the Maſs Trochisks to be dry'd in the ſhade. When they are dry powder them again, and mix them with more Mucilage of Tragacanth: Make new Trochisks; dry them in the ſhade, and keep them for uſe.

Chooſe out the Apples of Coloquinth very white and well grown; and throwing away the grains cut the pulp very ſmall, and having ſlightly moiſten'd it with ſome drops of Oyl of ſweet Almonds, bruiſe it in a Braſs-Mortar, and paſs it through a Silk-Sieve. In the mean time pulverize one or two drams of Gum-Tragacanth very white, and infuſe it upon hot Embers in five or ſix ounces of good Roſe-water till it be altogether diſſolv'd and reduc'd into a thick but ſoft Mucilage: Then put the powder of Coloquinth into a Marble-Mortar, and having moiſten'd it with ſome part of the Mucilages beat it together with a woodden-Peſtle, and reduce it to a maſs ſomewhat ſolid, of which you ſhall make little Trochisks, and dry them in the ſhade. When they are dry pulverize them again; and having paſs'd the powder through a Silk-Sieve, incorporate it with new Mucilage of Gum-Tragacanth, for a maſs to make Trochisks like the former; which are to be dry'd in the ſhade and put up for uſe.

Some add Gum Arabic and Bdellium to the Tragacanth, to extract Mucilages neceſſary for the compoſition of theſe Trochisks. But the principal intention of them that added them being only to ſtifle and abate the violent operation of the Coloquinth, and to ſeparate all the ſmall parts from it, by beating and rebeating it, and paſſing it twice through the ſieve, the Gum-Tragacanth may very well ſuffice alone, and the two other Gums may be very well omitted.

Theſe

These Trochisks purge flegme, and thick, and viscous humours, particularly of the Brain, Breast, Flesh, and Joynts; so that they are often prescrib'd in Epilepsies, Apoplexies, Vertigo's, and old diseases of the Head; against Asthma's, and Coughs, stoppage of the Lights, Sciatica's, Rhumatisms, and all Maladies of the Joynts; but particularly against Dropsies, especially that call'd Ascites, Colicks caus'd by viscous and tenacious humours. Their excessive bitterness is the reason that they are never prescrib'd but in *Bolus*. Their violent operation also causes them to be seldome prescrib'd, but only to be mix'd with gentle Medicines. However the infusion of these Trochisks is given alone, made in white Wine for those that cannot endure the bitterness of the taste; and it succeeds very well. The usual dose is a scruple of Trochisks bruis'd, infus'd in four ounces of white Wine, the liquor whereof must be drank pass'd through coarse paper, and the dose repeated three times for three several days. But when these Trochisks are given in their proper substance, the dose is from a grain to seven or eight, or at fartheſt ten for very strong Constitutions, and in extraordinary Diseases; especially in those where nature is over-burthen'd and is not able to help her self.

Trochisks of Alhandal are put into several compositions, especially Pills; and they may be us'd where-ever Coloquinth is prescrib'd in substance, and so much the rather, because the Coloquinth being there finely powder'd is less apt stick to the Stomach and Intestines.

Trochisci Bechici Albi.

℞. *Sacchari albissimi subtiliter pulverisat.* ℔ j ß.
Amyli,
Ireos Florentiæ,
Liquoritiæ mundatæ subtilissimè pulverat. an. ℥ j.
Ambræ Grisea,
Moschi Orientis, an. gr. iiij.

White Trochisks against Coughs.

℞. Finest white Sugar finely powder'd, ℔ j ß.
Amylum, or Starch of Wheat,
Florence Orrice,
Liquorice cleans'd finely powder'd, *an.* ℥ j.
Amber-greese,
Eastern Mosch, *an.* gr. iiij.

Pulverize very finely a dram of Gum-Tragacanth very white, dissolve it upon hot Embers in five or six ounces of good Rose-water, and reduce it to a mucilage, and set it by. Choose out the best Liquorice, and scrape off the rind, so that nothing appear but what is very yellow; pulverize it very finely apart, as well as the Amydon or Amylum, the Florence Orrice, and the fine Sugar. Pulverize together the Musk and the Amber-greese, mixing therewith about two drams of Sugar-Candy to facilitate the division of the parts. Then mix all these powders in a Marble-Mortar, and having incorporated them with as much of the mucilage of Gum-Tragacanth as is requisite to reduce them into a paste somewhat solid, form it into Trochisks, or little sticks to be dry'd in the shade and kept for your use.

Some call these Trochisks by the name of Juice of white Liquorice; the Receipt whereof is not to be found in the Dispensatories. Sometimes also they alter the Ingredients, mixing therewith Sugar-Candy, or Penedite; and increasing or abating the quantity of the rest.

These Trochisks are us'd against salt and sharp defluxions that fall upon the Brain and upon the Lungs. They give ease to them that are troubled with violent Coughs, or suffer any oppression upon their Lungs; they may be taken at any time, holding them in the Mouth till they melt. They are also good to preserve the Breath sweet and grateful to the smell.

Trochisci Bechici Nigri.

℞. *Succi, sive extracti Liquoritiæ inspissat.* ℥ ix.
Pulveris Ireos Florentiæ,
Amyli, &
Liquoritiæ mundat. an. ℥ ij.
Cinnamomi acutissimi, ℥ j.
Sacchari albissimi,
Candi, &
Penidiati pulveratorum, an. ℔ j.

Black Trochisks against Coughs.

℞. Juice or Extract of Liquorice thicken'd, ℥ ix.
Powder of Florence Orrice,
Wheat-Starch, and
Liquorice cleans'd, *an.* ℥ ij.
Biting-Cinnamon, ℥ j.
Sugar refin'd,
Candy, and
Penidiate pulveriz'd,
of each, ℔ j.

Make

Make a ſolid Paſte of all with Mucilage of Gum-Tragacanth, extracted with Hyſop-water, and form it into Trochisks to be dry'd in the ſhade.

Theſe Trochisks are call'd black becauſe of their dark colour. They are not ſo pleaſing as the preceding. They that would prepare them well, ſhould make uſe of Extract of Liquorice prepar'd as I ſhall direct in its proper place. But they that will not take that pains, muſt take good Liquorice, and having diſſolv'd it in ſom Pectoral-water, and filter'd it, muſt evaporate it afterwards to the conſiſtence of an Extract.

Theſe Trochisks are much us'd in Diſeaſes of the Lungs, eſpecially where there is any occaſion to cut and looſen Flegm, and to haſten expectoration: They are to be taken as the former, but leſs at a time.

You may add to the compoſition Eaſtern-Bole, Terra-Sigillata, and Poppy-ſeed, or Extract of Opium, if you would make them more fit to ſtop defluxions from the Brains upon the Lungs: and make them like to Trochisks of *Terra-Sigillata*, or *Karabe*. Theſe Trochisks may be prepar'd at any time; and therefore it is better to prepare them often, then let them be ſpoyl'd.

Trochiſci Albi Rhaſis.		*White Trochisks of Rhaſes.*	
℞. *Ceruſſæ aquâ Roſarum lotæ,*	℥ *ijß.*	℞. White-lead waſh'd in Roſe-water,	℥ ijß.
Sarcocollæ lacte muliebri nutritæ & ſiccatæ,	℥ *vj.*	Sarcocol moiſten'd with Womans-milk and dry'd,	℥ vj.
Amyli,	℥ ß.	Pounded Wheat-flowre	℥ ß.
Gummi-Arabici, &		Gum-Arabic, and	
Tragacanthi, an.	℥ *ij.*	Tragacanth, *an.*	℥ ij.
Camphoræ,	℥ *j.*	Camphire,	℥ j.

Chooſe out good Ceruſe of *Venice*, and bray it upon Porphyrie with Roſe-water, as you grind Pretious-ſtones; and when it is reduc'd into a Powder not to be felt, extend it upon White-paper and let it dry. Then beat the Sarcocol very fine, being moiſten'd with Womans-milk, and having reduc'd it into a Paſte, extend it and expoſe it to the Air to be there dry'd, then beat it and ſierce it through a ſilk-ſive. Beat the Gums apart in a braſs-mortar hot, and paſs the ſame through a ſilk-ſieve. Pulverize alſo the Camphire apart, adding never ſo few drops of Spirit of Wine: then beat the Amylum and prepar'd Ceruſe, and having mix'd them with the other Powders, paſs the whole through a Silk-Sieve, and having put the Powder into a Marble-Mortar, moiſten it with Roſe-water, and having reduc'd it into a ſolid Paſte, make thereof little Trochisks to be dry'd in the ſhade; and kept for uſe. But becauſe theſe Trochisks being dry are almoſt as hard as a ſtone; by the conjunction of the caſeous part of Womans-milk, and the Sarcocol with the dry Ingredients that make the Powder; It will do better to keep the Powder when it is made, then to form it up into Trochisks; in regard it will eaſily keep ſo, and that it is an eaſie thing afterwards to put Roſe-water or Womans-mik to it, when you have occaſion to uſe it.

You may alſo moiſten the Sarcocol with Roſe-water; if you prepare the Powder in Winter, for then the Milk will grow ſowre and corrupt before the Sarcocol be dry.

The Arabians call theſe Trochisks by the Name of *Sief*, and the Latins and French have given them the name of *Collyrium*, as being chiefly proper for Diſeaſes of the Eyes, of which they qualifie the Inflammations, cleanſe the Ulcers, and ſtop and dry up the defluxions. They are alſo us'd in Injections for Inflammations and Ulcers of the Ureters and Bladder, particularly in Gonorrheas. For which two ſorts of uſes the Powder is diſſolv'd in diſtill'd waters, or in decoctions or other ſpecific Liquors. The Doſe is half a dram, or at moſt a dram of Trochisks or Powder to four ounces of Liquor: The Doſe is alſo to be vary'd, when you mingle with it Turbith prepar'd, Salt of Saturn, Magneſia Opalina, Aloes, Vitriol, *&c.* according to the intent of the Phyſician.

Trochiſci Aliptæ Moſchatæ.		*Odoriferous Musk Trochisks.*	
℞. *Labdani puriſſimi,*	℥ *iij.*	℞. Of the pureſt Ladanum,	℥ iij.
Reſinæ Storacis,	℥ *jß.*	Gum-Storax,	℥ jß.
Benjonii,	℥ *j.*	Benjamin,	℥ j.
Ligni Aloes,	℥ *ij.*	Ligni Aloes,	℥ ij
Moſchi Orientalis,	℈ ß.	Oriental-Musk,	℈ ß.

The

The lignum Aloes must be pounded apart in a great Brass-Mortar, and pass'd through a silk'n sieve. The Ambergriese must be also powder'd apart, mixing with it never so little Oyl of Nutmegs; and the musk, by mixing with it never so little Sugar, candy'd. It may be also ground with the powder of *Lignum Aloes*. Could you get *Laudanum* very pure, you might melt it in a great hot Brass-Mortar, as well as the purifi'd Rosin of *Storax*, and the *Benjamin* if that were in Tears; and then there would be no need of Rose-water or mucilage of Gum Tragacanth, for these melted Gums would easily suffice to bind together the powder of Aloes, Musk and Ambergriese, and which is a Bitumen easie to melt. But the impurities of Ladanum and Benjamin oblige us to beat and sift them through a silk-Sieve, and to make use of some moist or viscous matter, to unite the whole mass for to make the Trochisks. Prepare the Rosin of *Storax* as I have directed before; and incorporate it with the other Ingredients pulveriz'd in a marble-mortar, heated before, using therein as much mucilage of Gum-Tragacanth as is necessary to reduce the whole into a gentle Paste, to make the Trochisks which are to be dry'd in the shade.

The name of *Alipta Moschata* was giv'n to these Trochisks, because of the mixture of odoriferous and musky Drugs in the composition. The Camphire prescrib'd in other Dispensatories is omitted; by reason that its displeasing smell would surmount the scent of all the other Ingredients. However it may be added in the preparation of these Trochisks, when they are for Women that do not love sweet smells.

These Trochisks are very much esteemed for their fragrancy. They are good in the sickness-time against the pestilential air. But they are more frequently us'd to strengthen the brain and the noble parts. They may be carry'd in a small Box with holes, or burnt upon a Coal like a perfume to perfume a Chamber, Linen or Cloaths. They may be also pulveriz'd and mix'd with Rose-water, or Orange-flower water, and pour'd upon a hot Chafing-dish to perfume Bed-chambers or Dining-rooms.

Trochischi Galliæ Moschatæ.		*Trochisks of Gallia Moschata.*	
℞. *Ligni Aloes optimi,*	℥ v.	℞. The best Lignum Aloes,	℥ v.
Ambræ Grisea,	℥ iij.	Ambergriese,	℥ iij.
Oriental. Mosc.	℥ j.	Oriental Musk,	℥ j.

With mucilage of Gum-Tragacanth extracted with Rose-water, make up these Trochisks, and drye them in the shade.

The Ambergriese and Musk must be ground upon Porphyry; and the Lignum Aloes finely powder'd. But be careful to moist'n the ends of your Fingers, with never so little Oyl of sweet Almonds, when you make up the Trochisks, to make the Paste stiff, and the Trochisks little, that they may be soon dry, and lose as little as is possible of their scent and vertue.

These Trochisks are commended by all Authors to strength'n the Brain, the heart, the Stomach, and all the Bowels, to stay vomiting, to facilitate transpiration, and keep the breath sweet. They are to be held in the mouth, and there gently dissolv'd: or else pulveriz'd and put with Rose-water or Orange-flower water upon a Chafing-dish of dying Embers, to receive the Vapours, or to perfume Chambers, Linen or Cloaths. You may add to the Paste of these Trochisks some small quantity of Willow-Coal powder'd very fine, and form them into Bracelets or Beads, to be dry'd, strung, and worn, or else to be laid among Cloaths.

Trochisci de Karabe.		*Trochisks of Carobs.*	
℞. *Karabes,*	℥ j.	℞. Carobs,	℥ j.
Cornu-cervi usti,		Harts-horn burnt,	
Gummi Arabici,		Gum Arabic,	
Tragacanthi,		Tragacanth,	
Acaciæ veræ,		True Acacia,	
Hypocistidis,		Undergrowth of Cystus,	
Balaustiorum,		Pomegranate Flowers,	
Mastiches,		Mastich,	
Coralli Rubri,		Red Coral,	

Gummi Laccæ,		Gum-Lac,	
Sem. Papav. nigri, an.	℈ viij.	Black Poppy-ſeed, *an.*	℈ viij.
Thuris,		Frankincenſe,	
Croci, an.	ʒ ij.	Saffron, *an.*	ʒ ij.
Extracti Opii,		Extract of Opium,	

Bruiſe the Pomegranate Flowers, the true Acacia, and the Undergrowth of Cyſtus in a great Braſs-Mortar, if they be dry, with the Poppy-ſeed. Bray the red-Coral upon Porphyry, together with the Harts-horn burnt, and the Carobs, moiſtning them in water of Mouſe-ear, Rupture-wort, or ſome aſtringent Water. Beat the Gum-Tragacanth in a Braſs Mortar heated. Beat the Maſtic, the Gum-Lac, the Frankincenſe and Saffron apart, and ſift them through a ſilk-ſieve, as you muſt do the reſt of the Powders. Incorporate the Extract of Opium with about an Ounce of mucilage of Flea-wort, and having mix'd all the Powders therewith, beat them together in a great Mortar, adding as much mucilage as is requiſite to reduce the whole into a ſolid paſte, which is to be form'd into little Trochisks, and dry'd in the Sun.

Theſe Trochisks are good againſt all internal fluxes of blood, and particularly againſt ſpitting of blood; for Ulcers in the Lungs, Dyſenteries, and Cholicks. They are to be finely powder'd, and given in aſtringent Waters or Decoctions, at a diſtance from eating. The Doſe is from a Scruple to a dram.

The Harts-horn burnt may paſs well enough here, becauſe there is nothing requir'd but the aſtringent quality which remains in the earthy part after uſtion. The uſtion of the Coral is altogether to be rejected, as not to be done without altering its good qualities: and the burning of the Poppy-ſeed is altogether erroneous, as deſtroying altogether the vertue of the ſeed.

Trochiſci Gordonii.

℞. *Seminum quatuor frig. maj. mund.*		℞. Four greater cold Seeds cleans'd,	
Papaveris Albi,		White Poppy-ſeed,	
Malvarum,		Seeds of Mallows,	
Bombacis,		Cotton-tree,	
Portulacæ,		Purſlain,	
Cotoneorum,		Quinces,	
Myrthillorum,		Myrtles,	
Gummi Arabici,		Gum-Arabic,	
Tragacanthi,		Tragacanth,	
Nucleorum Pineorum mund.		Pine-Kernels cleans'd,	
Piſtaceorum,		Piſtaches,	
Sacchari Cryſtallini, &		Cryſtall'd Sugar, and	
Penidiati,		Penidiate,	
Glycyrrhizæ mundat.		Liquorice ſcrap'd,	
Hordei mundat.		Barley cleans'd,	
Amygdalarum dulcium,		Sweet Almonds,	
Mucilagin. ſem. Pſyllii, an.	ʒ ij.	Mucilage of the ſeed of Fleawort, *an.*	ʒ ij.
Boli Armenæ,		Bole Armeniac,	
Lachrymarum ſang. Draconis,		Tears of Dragons blood,	
Raſuræ Eboris,		Shavings of Ivory,	
Roſarum rubrarum, &		Red Roſes, and	
Myrrhæ electæ, an.	℥ ß.	Choice Myrrhe, *an.*	℥ ß.

Trochisks of Gordonius.

Pulverize apart the Bole Armoniac and Dragons-blood in Tears; mingling with them as much of the cold Seeds as the powder will bear. Beat together in a great Braſs-Mortar the ſhavings of Ivory, the Liquorice, the Parſley, the Myrtles, the Myrrhe, the red Roſes, the Mallows, Quince, Purſlain, Poppey, and Cotton-ſeeds; you may alſo mix the Gum-Arabic and Tragacanth together, and as much of the cold Seeds as the powder will bear, and having ſifted them through a ſilk-Sieve, and the Sugar Candy and the powders pulveriz'd, then cut very ſmall the *Pine*-Kernels, the *Piſtaches*, and the Almonds with a Shoemakers Knife, then beat them in a Marble-*Mortar* with a wooden-*Peſtle*, till the whole be hardly to be felt. Then mix all the powders, and incorporating them with the cold Seeds, the Almonds, the *Pine*-Kernels, and

and the Piſtaches beaten, add of the Muſcilage of Flea-wort and Hydromel, as much as will ſuffice to reduce them into a good Paſte; of which when the Trochisks are made, dry them in the Sun. But in regard theſe Trochisks are not to be kept, by reaſon of the unctuous Seeds and Fruits that compound them, and are onely to be made when occaſion requires; therefore the beſt way is not to make them into Trochisks, but to adminiſter the moiſt Maſs, when it is fully prepar'd.

Gordonius the Author of theſe Trochisks extols them for the cure of Ulcers in the Reins; and for thoſe that piſs Blood, as alſo for the Diabetes, the Strangury, Gonorrheas and Ulcers of the Bladder and Ureters. The Doſe is from one Dram to two mix'd in Hydromel, in Milk, or in ſome proper diſtill'd-water, or Decoction. It is alſo uſed for Injections into the natural parts of men or women, mix'd in the ſame manner. Theſe Trochisks are alſo proper for the moſt part of Diſeaſes of the Breaſt, as well to ſtay Defluxions, as to qualifie their Acrimony.

Trochiſci de Rhabarbaro.

℞. *Rhabarbari optimi,* ℥ *x.*
Amygdalarum amararum excorticatarum, ℥ ß.
Roſarum rubrarum exungulatarum, ℥ *iij.*
Radicis Rubiæ Tinctorum,
Spicæ Nardi,
Abſinthii Majoris,
Aſari,
Seminis Apii, &
Aniſi, an. ℥ *j.*

Trochisks of Rhubarb.

℞. The beſt Rhubarb, ℥ x.
Bitter Almonds peel'd, ℥ ß.
Red Roſes cleans'd, ℥ *iij.*
Root of Dyers-Madder,
Spikenard,
The bigger Wormwood,
Aſarabacca,
Seeds of Parſley, and
Aniſe, *an.* ℥ *j.*

Take off the skins of the Almonds with the point of a Knife, beat them in a large Braſs-Mortar with the Rhubarb, Madder, Aſarabacca, Spikenard, Wormwood, Roſes, Parſley, and Aniſeeds, and ſift the Powders through a Silk-ſieve, and mingle them afterwards with Juice of Eupatorium or Agrimony depurated and reduc'd to the Conſiſtence of Honey, beating the whole for ſome time together, to unite the Ingredients the better, and bring them into a kind of a ſolid Paſte, and make it into little Trochisks; which muſt be dry'd in the ſhade, and ſo kept for uſe.

Theſe Trochisks are us'd at the end of long ſickneſſes, eſpecially the Jaundiſe, Dropſies, and Cachexies. It ſerves alſo for the cure of thoſe that are troubl'd with Pains, Swellings, and Obſtructions of the Liver, Spleen, and Meſentery. They are given in Powder in white-Wine, or in ſome other proper Liquor, from a Scruple to a Dram. They may be alſo mix'd in Tablets, Opiates, and Potions.

Trochiſci de Capparibus.

℞. *Corticis Radicum Capparum, &*
Seminis Agni Caſti, an. ℥ *vj.*
Gummi Ammoniaci, ℥ *iiij.*
Amygdalarum amararum mundatarum,
Seminis Nigellæ,
Naſturtii,
Summitatum Calaminthæ,
Radicum Acori veri,
Ariſtolochiæ Rotundæ,
Cyperi,
Foliorum Rutæ, &
Scolopendrii ſiccorum, an. ℥ *ij.*
Succi Eupatorii ad mellaginem inſpiſſati, q. ſ.

Trochisks of Capers.

℞. Of the Rind of Caper-Roots, and
Seed of the Chaſte Tree, *an.* ℥ vj.
Gum-Ammoniac, ℥ iiij.
Bitter Almonds peel'd,
Seed of Fennel Flower,
Creſſes,
Tops of Calamint,
Roots of true Acorus,
Round Birthwort,
Cyperus,
Leaves of Rue, and
Spleenwort dry'd, *an.* ℥ ij.
Juice of Agrimony, *q. ſ.*

Having preſs'd out and depurated the juice of Agrimony, boil it over a ſoft fire to the conſiſtence of Honey. Then beat together in a great Braſs-Mortar the Caper-Roots, the true Acorus, the Cyperus, the Birth-wort, the Seeds, the bitter Almonds, the Calamint, Rue and Spleen-wort, according to the method of Trituration, and ſift them through a Silk-ſieve. Then heat the Braſs-Mortar and Peſtle; and having melted the Gum-Armoniac, and mix'd it with ſome part of the juice of Agrimony, incorporate the Powders with it by degrees, adding as much juice of Spleen-wort as is neceſſary to make a paſte ſolid enough to make up the Trochisks, which are to be dry'd in the ſhade and kept for uſe.

The Trochisks are proper to cut and attenuate thick and tartarous humours, and to open the obſtructions of the Liver, Spleen, Pancreas, and Meſentery, as alſo to ſoften their hardneſſes, and thoſe of all the lower part of the belly; and to diſſipate the flatuoſities of the Hypochondrium and Inteſtines. They are to be given in powder mix'd in convenient Liquors, or among other Medicins like Opiates or otherwiſe. Their Doſe is from a Scruple to one Dram.

Trochiſci de Myrrha.

℞. *Myrrhæ Electæ,*
Lupinorum Excorticatorum, an. ʒ v.
Foliorum Rutæ ſiccorum,
Dictamni Cretici,
Mentaſtri,
Pulegii Regalis,
Seminis Cumini,
Radicis Rubiæ Tinctorum,
Aſſæ Fetidæ,
Sagapeni,
Opoponacis, an. ʒ ij.

Trochisks of Myrrh.

℞. Choice Myrrh.
Lupin's ſhal'd, *an.* ʒ v.
Leaves of drye Rue,
Cretan Dittany,
Wild Mints,
Penny-Royal,
Cumin-Seed,
Root of Madder,
Aſſa-Fetida,
Sagapene,
Opoponax, *an.* ʒ ij.

Beat all together the Lupines cleans'd from their Hulls, the Madder-Roots, the Leaves of Rue, wild-Mint, Penny-Royal, Dittany, Cumin-Seed, and Myrrh. Chuſe out the pureſt drops of Aſſa Fetida, Sagapene, and Opoponax, and melt them by degrees in a brazen-Mortar heated, mixing therewith about an Ounce of the juice of Mugwort, wherein the powders are to be incorporated, ſo that the whole may be reduced into a paſte, fit to be made up in Trochisks; which muſt be dry'd in the ſhade and kept for uſe.

Theſe Trochisks are highly recommended againſt the Retention of the Menſtruums. For they ſubtilize the blood, and hinder the coagulation. They alſo cut thick and viſcous matters that cauſe Obſtructions, and by that means they open the paſſages of the Matrix. They bring away the After-birth and dead Child. They are to be powder'd and given in a Decoction of the Berries of Juniper, or ſome other Hyſterical Plant. Their Doſe is from one Scruple to a Dram. They may be alſo powder'd and incorporated with Oyl of Petroleum or Amber, and ty'd in a knot to be held to the Noſe againſt Hyſteric Vapours.

Trochiſci Diarrhodon.

℞. *Roſarum rubrarum recentium exungulatarum,* ʒ j.
Raſuræ Eboris,
Santali Citrini, & Rubri, &
Radicis Liquoritiæ mundat. an. ʒ iij.
Maſtiches electæ, ʒ ij.
Croci, ʒ j.
Camphoræ, gr. xij.
Aquæ Roſarum, q. ſ.

Trochisks of Roſes.

℞. New Red-Roſes cleans'd from their bottoms, ʒ j.
Shavings of Ivory,
Saunders Yellow, and
Red, and
Root of Liquorice cleans'd, *an.* ʒ iij.
Choſen Maſtich, ʒ ij.
Crocus, ʒ j.
Camphire, gr. xij.
Roſe-water, *q. ſ.*

This

This Receipt is not inferiour to any that are to be met with in any Diſpenſatories, though the difference be great, as well in reference to the ingredients, as the quantities: Beat together in a great Braſs-Mortar the ſhavings of Yvory, Sanders, and Liquorice, and ſift them through a Silk-ſieve: Triturate the Maſtick and the Saffron ſeverally apart, as alſo the Camphire, obſerving what I have formerly directed. Chuſe out the large buds of freſh Red-roſes, and having cut off the ungulous part or bottoms with a pair of Sciſſars, beat them in a Marble-Mortar with a Wood'n-peſtle, till they are almoſt impalpable; then mixing the Powders therewith, beat the whole for ſome time, adding as much Roſe-water as is neceſſary, to make the Maſs ſolid enough for the forming of little Trochisks to be dry'd in the Sun.

Theſe Trochisks ſtrength'n the Stomach very much, as alſo the Liver and Bowels: They diſſipate the pains and old maladies thereof, and are giv'n with ſucceſs in Dyſenteries and Cholical Paſſions. Their doſe and manner of taking are very little different from thoſe of the Trochisks preceding.

Trochiſci de Camphora.		*Trochisks of Camphire.*	
℞. *Roſarum Rubrarum mundatarum, &*		℞. Red Roſes cleans'd, and	
Mannæ Calabrinæ, an.	℥ ß.	Calabrian-Manna, *an.*	℥ ß.
Santali Citrini,		Yellow-Saunders,	
Liquoritiæ mundatæ,		Liquorice cleans'd,	
Raſuræ Eboris, an.	℥ *iij.*	Shavings of Yvory, *an.*	℥ iij.
Semin. quat. frig. maj. mundatorum,		The four greater cold ſeeds cleans'd,	
Gummi Arabici,		Gum-Arabic,	
Tragacanthi,		Tragacanth,	
Nardi Indicæ,		Indian-Spikenard,	
Ligni Aloes,		Lignum Aloes,	
Croci, an.	℥ *j.*	Saffron, *an.*	℥ j.
Camphoræ,	℈ *ij.*	Camphire,	℈ ij.

Beat together in a great Marble-Mortar the Yellow-Saunders, Lignum-Aloes, Liquorice, ſhavings of Yvory, the Spikenard, the Red-Roſes and Spikenard, and ſift them through a Silk-ſieve. Beat apart the Manna and Camphire, adding at laſt never ſo ſmall a drop of Spirit of Wine. Make choice of Manna in Tears; and having beat it in a Marble-Mortar with a Wood'n-peſtle, add thereto about an ounce of Muſcilage of Flea-wort; and mixing the Powder therewith by degrees, and what is wanting of the Muſcilage, beat the whole to a ſolid Paſte, fit to make little Trochisks, and dry them in the ſhade.

Theſe Trochisks are preſcrib'd in Burning-Fevers, to quiet the boiling of the blood and choler, to moderate the heat of the ſtomach and liver, and to quench inordinate thirſt. They are prevalent alſo againſt the Jaundice, Ptiſic, and Hectic-Fevers. Their doſe and manner of taking is the ſame with the former: They are alſo put into Hyſteric Glyſters, from one to two drams, pulveriz'd and mingl'd with proper Decoctions.

Trochiſci Hedychroi.		*Trochisks of Sweet Perfumes.*	
℞. *Mari,*		℞. Herb Maſtich,	
Amaraci,		Sweet Marjoram,	
Aſpalathi,		Thorn-Buſh,	
Aſari, an.	℥ ß.	Aſſarabacca, *an.*	℥ ß.
Shoenanthi,		Camels Hay,	
Calami Aromatici,		Aromatic Reed,	
Coſti,		Coſtus,	
Xylo-Balſami,		Xylo-Balſamum,	
Opobalſami,		Opobalſamum,	
Cinnamomi, an.	℥ *vj.*	Cinnamon, *an.*	℥ vj.
Myrrhæ,		Myrrh,	
Folii Indi,		Indian-leaf,	
Nardi Indicæ,		Indian-Spikenard,	

Croci,		Croci,	
Caſſiæ Ligneæ, an.	℥j ß.	Caſſia-wood, *an.*	℥j ß.
Amomi,	℥iij.	Amomum,	℥iij.
Maſtiches electæ,	℥ij.	Choice Maſtich,	℥ij.

Having well choſen and cleans'd all theſe Ingredients, beat them together in a Braſs-Mortar; and having ſifted the Powder through a Silk-ſieve, incorporate them with good Malmſey, till the Paſt is become ſolid enough to make little Trochisks, which are to be dry'd in the ſhade.

Marum, or Herb Maſtich, grows in certain Iſlands near *Toulon* in *Provence*, and is planted alſo in Gardens. This Plant is very much about the bigneſs of Thyme, which it reſembles, having ſeveral little round branches, ſomewhat woody, cover'd with a kind of Hoary Down, toward the top eſpecially: The leaves are green, ſomewhat inclining to white, very ſmall, and pointed like the Head of a Pike: The tops are tufted like thoſe of Lavender, full of little Purple-flowers very odoriferous: The taſt of it is ſharp and biting, and leaves a bitterneſs in the mouth: The flowry tops are only made uſe of in theſe Trochisks.

Aſpalathus is the wood of a Thorn-tree, or Buſh, ponderous, maſſive, and unctuous; ſomewhat ſharp and bitter to the taſt, of a purpliſh colour, and ſomewhat ſpotted; in vertues, taſt, ſmell, and figure, much reſembling Lignum-Aloes, but that Lignum Aloes is of a browner and duller colour: And indeed, when *Aſpalathus* is not to be had, Lignum Aloes may be very well us'd in its ſtead. The neweſt *Calamus Aromaticus* is the beſt, in regard it is ſubject to rot if it be long kept.

Theſe Trochisks are good to expel Venom, and for the cure of all thoſe Diſeaſes for which the Ancient Treacle is preſcrib'd: They are to be taken and dos'd like other Theriacal Trochisks.

Trochiſci Cypheos.

℞. *Pulpæ Uvarum Damaſcenarum,*

Terebinthinæ Chiæ, an.	℥j.
Myrrhæ electæ,	
Schoenanthi, an.	℥ ß.
Cinnamomi,	℈iiij.
Calami Aromatici,	
Bdellii,	
Spicæ Nardi,	
Caſſiæ Ligneæ,	
Cyperi,	
Granorum Juniperi, an.	℥j.
Aſpalathi,	*gr.* 54.
Mellis optimi Malvatico diluti tantillum.	

Trochisks of Cyphi.

℞. Pulp of the faireſt and largeſt Raiſins,

Chio-Turpentine, *an.*	℥j.
Choice Myrrh,	
Camels Hay, *an.*	℥ ß.
Cinnamon,	℈iiij.
Calamus Aromaticus,	
Bdellium,	
Spikenard.	
Caſſia-wood,	
Cyperus,	
Juniper-Berries, *an.*	℥j.
Aſpalathus,	*gr.* 54.
Of the beſt Honey mix'd with Malmſey, never ſo little.	

Reduce into very fine Powder, in a Braſs-Mortar, the Myrrh and Bdellium among the Camels Hay, the Cinnamon, Acorus Verus, Spikenard, Caſſia-wood, Cyperus, Juniper-berries, and Aſpalathus, as alſo the Saffron, if you cannot beat it apart; and having ſeparated the skins and the ſtones of the Raiſins from the Pulp, paſs it through a Hair-ſieve revers'd, without any addition of Wine, or any other moiſture. The Turpentine being of a conſiſtence ſolid enough, needs not to be dry'd over the fire; but rather that way is to be avoided, for fear of diſſipating its beſt parts, which are its ſpiritous and Æthereal Oyl: Nor will there be any need of Honey or Oyl, ſince the Turpentine, and the Pulp of Raiſins, will be ſufficient to mix the Powders, if rightly order'd; and the Trochisks will be the better, and drier.

The vertues of theſe Trochisks are very like to thoſe of Mithridate: And their doſe is from one ſcruple to one dram, in ſome proper Liquor.

Trochiſci

Trochiſci Scillicitei.	*Trochisks of Squills.*
℞. *Scillæ pane prius involutæ & in clibano coctæ,* ℔ j.	℞. Of Squills firſt wrapt in Dough, and bak'd in an Oven, ℔ j.
Radicis Dictamni Albi ſubtiliter pulverati, ℥ viij.	Root of white Dittany finely powder'd, ℥ viij.

Chuſe out well-grown, firm, weighty Squills, of a moderate bigneſs, tak'n out of the Earth when the leaves are paſt, and wrapping them up in a piece of Paſte made of Wheat-dough, about a finger thick, put them into a Bakers Oven among the Houſhold-bread, and leave them there till the Bread be bak'd; then draw them, and when they are cold, take them out of the Paſte, and peel off the red skins, which will be almoſt dry; and only reſerving the thin ſlices, throw away the Core, and the Root: Then weigh out the quantity of the ſlices preſcrib'd, and beat them in a Marble-Mortar with a Wooden-peſtle, mixing by degrees the Powder of the Root of Dittany ſifted through a Silk-ſieve; and having beaten the whole together, and reduc'd it into a Maſs, fit your Trochisks, make them up, and dry them in the open Air.

Wonder not that the Chiches which the Ancients made uſe of in theſe Trochisks are omitted, in regard they have not any good qualities to ſecond the vertue of the Squills, nor of any ingredients in the Treacle, for which theſe Trochisks are principally prepar'd: But the Dittany is well preſcrib'd in the room of them, as being not only fit to give a body to the Squills, but alſo to impart its cordial and Alexipharmacal vertue to the Trochisks, and conſequently to the Treacle.

Nor can I hold with *Swelfer* who preſcribes the Juice or Pulp of Squills in the Treacle, inſtead of the Trochisks. For it is not to be thought that the baking of the Squills wrapt up in Dough, can cauſe any diſſipation of their vertue; in regard it is apparent, that they abound in ſuperfluous moiſture, which it is very convenient to abate, and that the baking is as it were a maturation of its parts, by which their Acrimony is manifeſtly carry'd off.

Whereas he ſays, it is a difficult thing to make Trochisks of eight ounces of Dittany, and twelve of Squills, by reaſon of their ſuperfluous moiſture; I can affirm, that I have ſeveral times experimented the contrary, and that they may be eaſily dry'd in the Air, without the help of Fire or Sun's heat.

As to the diminution of the ſubſtance of the Squills in drying, I confeſs with him, that it is great enough, but not ſo much as he would make us believe; for out of the twelve ounces of Squills, and eight of Dittany, there remains ten of Trochisks well dri'd: Nor is the vertue loſt, but concenter'd with that of the white Dittany. The white Squills are the beſt, if they can be had.

The uſe of the Trochisks is in Treacle; their vertue is Alexipharmacal, to which the Root of Dittany contributes very much; but their chiefeſt vertue is to cut and attenuate viſcous and tenacious humours: For which reaſon they are preſcrib'd with ſucceſs againſt Apoplexies, Epilepſies, and Diſeaſes proceeding from abundance of Flegm: They may be taken like other Trochisks.

Trochiſci Viperini.	*Trochisks of Vipers.*
℞. *Truncorum hepatum, & Cordum Viperinorum in aere libero extra ſolis Radios ſiccatorum quantum libuerit.*	℞. Of the Trunks, Livers, and Hearts of Vipers dry'd in the op'n Air out of the Sun, as much as you think fit.

To prepare theſe Trochisks right, if the Winter have been mild, take up your Vipers at the end of *April*, or beginning of *May*, never minding the Sex; for the Males are as good as the Females, whatever the Ancients or Moderns have written, ſince they are moſt extraordinarily active, vigorous, and fleſhy; and in ſome reſpect they may be preferr'd before the Female which are full of Eggs, that ſuck and emacerate them. They alledge frequency of Coition, which is not to be heeded, as proceeding from an abundance of Spirits, and is a mark of the vigour and good Conſtitution of the Creature. Caſting therefore away the drooping Vipers, and ſuch whoſe Eggs are grown big, chuſe out thoſe that ſtir moſt, and are moſt vigorous; and without whipping

whipping or provoking them, cut off their heads close to their necks and their tails, close to the place where their Excrement comes out: Strip off their skins; and having tak'n out all their Entrails, except the Heart and Liver, dry them in the Air; and when they are dry, after you have cut them very small, beat them in a great Brazen-Mortar, and sift the Powder through a Silk-sieve. In the mean while, put a little Gum-Arabic powder'd into a large three ounces of excellent Malmsey, of which take a sufficient quantity to incorporate the Powder of Vipers; and then beating the whole together in a Marble-Mortar with a Wooden-pestle, reduce it to a uniform and solid Paste, fit to make Trochisks; upon which you may set your Seal, and then dry them in the shade, anoynting them afterwards with Balsom of *Peru*, to give them a pleasant scent.

The Trochisks thus prepar'd, may be kept much longer then the Powder, because that the dissolution of Gum-Arabic in Malmsey, renders the Trochisks compact, closes the Pores, and hinders the penetration of the Air, to which the Balsom contributes not a little.

These Trochisks are very prevalent against Poysons, particularly against the biting of Serpents, and all sorts of venomous Animals: They are often prescrib'd in malignant Fevers, and Epidemic diseases, and all such as proceed from the corruption of the blood: They are particularly prescrib'd for the Composition of Treacle, to which they serve for a Foundation, though the Vipers dry'd, with their Hearts and Livers may very well suffice, without the trouble of making Trochisks. Their dose is from half a scruple to half a dram, though you may give a dram to persons of a strong Constitution. They are tak'n in Wine, or in Cordial Waters, or Decoctions, or else mingl'd in Potions, Opiates, or other Remedies.

CHAP. XXII.

Of Pills.

PIlls are so call'd from their round figure, like to that of little Balls. They are also call'd *Catapotia*, because they are usually swallow'd whole. They were invented to comply with those that could not swallow dissolv'd Medicines, or were only for a small dose; as also to be provided of a Remedy, that by staying long in the Stomach, might have time to draw off the bad humours from the remote parts. Pills are also made for several uses; some to purge, some to fortifie the Brain, Stomach, or some other part; sometimes for diseases of the Breast; sometimes they are compos'd of pain-aswaging, and sleep-procuring Medicines; sometimes of Hysterics, Openers, and Anti-nephriticks. Laxative Pills have usually Aloes for their Basis: As for Coloquinth, Scammony, Agaric, Turbith, Hermodactiles, Senna, Rhubarb, and other Laxatives, they are variously prescrib'd; as also several Gums and Spices, according to the prudence and intent of the Physitian. Anodynes, and sleep-procurers, have generally Opium for their Foundation, which is many times attended with ingredients that tend to the same end, but always of Aromatics proper to fortifie the Noble parts during the operation of the Pills. Aloes is also the Foundation of fortifying Pills.

The bitter and ill tast of Pills, and their unpleasing smell, forces us to cover them with Gold or Silver, to wrap them up in Sugar, or in Wafers, or in some sweet-Meat. They may be also made bigger or lesser, in compliance with the Patients desire.

There are several ways to make Pills, according to the variety and nature of the Ingredients that compose them. Hard and dry Ingredients are to be finely powder'd; fat Gums are to be dissolv'd and melted; Juices are to be depurated and thick'nd. The Mass is also variously made up; for sometimes you must incorporate the Medicaments pulveriz'd in a great heated Mortar, by beating them together without any addition of Liquor; and sometimes you must make use of Syrups, Honeys, Juices, or any other Liquor. The mass of all sorts of Pills ought to be beaten a good while in a great Brass-Mortar, to the end the Union of the Ingredients may be the better made: For which reason some have deriv'd the name of Pill from *Pila*, a Mortar, as if it were never to be beaten enough. Yet there are Pills prepar'd of Extracts that have no occasion to be beaten at all.

The

The Mass of Pills must not be so solid as that of Trochisks: For it ought to be of such a consistence that you may roll up the Pill with your Fingers, being anointed before with some Oyl to keep the Pills from sticking to them. All which things may be better understood by the particular Preparation of the Masses of Pills which follow.

Pilulæ de Hiera simplices.		*Simple Hiera-Pills.*	
℞. *Cinnamomi electi,*		℞. Choice Cinnamon,	
Santali Citrini,		Yellow Saunders,	
Asari,		Asarabacca,	
Spicæ Nardi,		Spikenard,	
Croci,		Saffron,	
Mastiches, an.	℥ *iij.*	Mastich, *an.*	℥ iij.
Aloes succotrinæ elect.	℥ *L.*	Aoes succotrine,	℥ L.

Beat in a great Brass-Mortar the Saunders, Spikenard cleans'd and cut, the Asarabacca and Cinnamon. Triturate the Mastich apart, mixing therewith never so small a drop of water. Beat the Saffron also apart, being dryed before: unless you think it better to triturate it in a small Brass-Mortar heated, where it will dry at the same time. Make choice of the purest Aloes succotrine, of a good scent, shining, transparent and of a purplish colour; and mixing with it some few drops of Oyl of sweet-Almonds, beat it to powder in a large Brass-mortar heated, and sift it through a Silk-sieve, as you must all the rest of the powders, which must be well mix'd together; and having put them into a large Brass-mortar heated, incorporate them with as much *Mel Rosatum* as is requisite to reduce the whole into a mass indifferently solid; which must be beaten in a Brass-mortar heated for a good while, till you perceive that all the Medicaments are exactly mix'd. After which having taken the mass out of the Mortar, make it into a kind of a round Loaf, a little high, and lay it two or three days in the air; then wrapping it up in a Skin a little oyl'd, keep the mass for use. When you have occasion for it, make the Pills of what bigness you please, as the Patient desires; anointing your Fingers with Oyl of sweet-Almonds, when you roll up the Pills. Then roll them up in Leaf-gold or Silver, in powder, Wafers or otherwise.

These Pills purge gently choleric and flegmatic humours of the Stomach and Intestines. They keep the Belly open, and help the retention of the Menstruums. Their Dose is from a Scruple to half a Dram: though you may give a Dram at a time, and more, if you desire they should work more strongly. But because they ought to work slow and moderately, and are to be repeated more then once, the best way is to take the lesser Dose. They are taken just before meals, and are therefore call'd the *Gormandizing Pills.* You may also take them rising, or going to Bed, or at any hour.

Pilulæ de Hiera cum Agarico.		*Hiera Pills with Agaric.*	
℞. *Specierum Hieræ simplicis jam præscriptæ,*	℥ j ß.	℞. The Powders of simple Hiera already prescrib'd,	℥ j ß.
Agaric. Trochiscati,	℥ ß.	Agaric Trochiscated,	℥ ß.

When you have prepar'd the Powder appointed for the last Pills, it is but mixing half an Ounce of Trochisks of Agaric with an Ounce and an half of the same Powder, observing the same Preparation.

These Pills work more strongly then the simple Pills, as well in cutting the Humours, as in drawing from the remote parts. For while they cut and loosen the thick Flegm from the Stomach, they also draw the same from the Head, and carry it downward. You may take these Pills like the former just before Meals in a small Dose. But it is better to augment the Dose from one Dram to four Scruples, and take them rising or going to Bed a good while after Supper, when there is a necessity of an entire Purgation.

Pilulæ

Pilulæ de Agarico.

℞. *Agarici Albiſſimi,*
Turbith Electi,
Specierum Hieræ Simplicis, an. ʒ ß.
Trochiſcorum Alhandal,
Sarcocollæ, an. ʒ *ij.*
Radicis Ireos,
Foliorum Praſſii Albi,
Myrrhæ Electæ, an. ʒ j.

Agaric Pills.

℞. Of the whiteſt Agaric,
Choice Turbith,
Powders of Simple Hiera, *an.* ʒ ß.
Trochisks of Alhandal,
Sarcocoll, *an.* ʒ ij.
Orrice-Root,
Leaves of white Hore-hound,
Choice Myrrh, *an.* ʒ j.

Chuſe out your Agaric very clean, white, light, and brittle; new Turbith, cleans'd from its Heart, and white within; beat them together in a large Braſs-Mortar, ſomewhat heated, with the Orrice-Root, the Trochisks of Alhandal, the Myrrh, the Sarcocol, the white Hore-hound, never minding the fatneſs of the Gums; for without that be, they cannot hinder the waſte of the Powder. Sift the Powder through a Silk-ſieve; then mixing with it the Hiera-powder, make it into a ſolid maſs with Burnt-wine, and then beat the maſs till the mixture be exactly made.

The Maſs of theſe Pills muſt be ſomewhat ſofter then that of the Hiera, eſpecially if you intend to keep it long; becauſe the moſt ſubtle parts of the Burnt-wine being ſubject to diſſipate, the Maſs will become dry in a ſmall time; which if not foreſeen, you muſt be forc'd to beat the Maſs again, and moiſten it with more Burnt-wine: wrap it up in an oyl'd-piece of Leather, like the former.

Theſe Pills purge very ſtrongly thick Flegm out of the Stomach, and the lower part of the Belly; as alſo from the Brain: They disburthen the Lungs, and give eaſe to the Aſthmatic, and thoſe that are troubled with old Coughs, through toughneſs of Flegm. The doſe is from a ſcruple to a dram, as alſo to four ſcruples, for them that are of a ſtrong Conſtitution. They are to be taken after the firſt ſleep, or early in the morning.

Pilulæ Aggregativæ ſive Polychreſtæ.

℞. *Aloes Succotrinæ*
Turbith Electæ,
Diagrydii, an. ʒ *vj.*
Rhabarb. Elect.
Myrobalanorum Citrinorum, an. ʒ ß.
Trochiſcorum Alhandal,
Agarici Albiſſimi,
Polypodii,
Myrobalanorum Chebulorum,
Indorum, an. ʒ *ij.*
Roſarum rubrarum mundat.
Maſtiches,
Epithymi,
Zinziberis,
Salis Gemmei, &
Seminis Aniſi, an. ʒ *j.*
Succorum Eupatorii & abſinthii ad mellaginem inſpiſſatorum, an. ʒ ß.

Aggregative, or Polychreſt Pills.

℞. Aloes Succotrin,
Choice Turbith,
Diagrydion, *an.* ʒ vj.
Choice Rhubarb,
Yellow Mirobalans, ʒ ß.
Trochisks of Alhandal,
Whiteſt Agaric,
Polypody,
Mirobalans Chebulæ,
Indian, *an.* ʒ ij.
Red-roſes cleans'd,
Maſtich,
Epithyme,
Ginger,
Sal-Gemmæ,
Anniſeed, *an.* ʒ j.
Juices of Agrimony and Wormwood, thick'nd to the ſubſtance of Honey, *an.* ʒ ß.

Theſe Pills are call'd Aggregative, or Polychreſt, becauſe they congregate and purge ſeveral bad humours together, drawing them from all parts of the body.

Pulverize together in a great Braſs-Mortar the Turbith, Rhubarb, Polypody, Mirobalans, Trochisks, Ginger, Roſes, Agaric, Epithyme, Aniſe, and Sal-Gemmæ, and ſift them through a Silk-ſieve: Pulverize the Diagrydion apart, mixing with it ſome few drops of Oyl of Sweet-Almonds. Pulverize alſo the Maſtich apart, mixing with it never ſo ſmall a drop of water. Preſs forth the Juices of Agrimony and Wormwood, clarifie

clarifie them and thick'n them to the conſiſtence of melted Honey, or of a ſoft Electuary. Beat the Aloes apart alſo, and having mix'd all the Powders very exactly together, make them up into a Maſs with the thickn'd Juices, and Syrup of pale Roſes, beating all together in a large Marble-Mortar, till the Ingredients are perfectly mix'd.

I am not of their opinion that would have the Juices of Wormwood and Agrimony dry'd, till fit to be powder'd, and ſo ſifted among the other Powders. For beſides that they may be exactly mix'd according to my method, I ſee no reaſon to dry them ſo; ſince it cannot be done without a conſiderable waſte of their vertue. Conſidering alſo that having conſumed all the moiſture of thoſe Juices, you muſt not only be conſtrain'd to make uſe of ſome alien moiſture to give the Maſs its due Conſiſtence, but alſo put that whoſe moiſture is conſum'd to no purpoſe into the Compoſition. For you muſt multiply the Doſe of the Syrup of Roſes, of which the leſſer quantity is always to be preferr'd before the greater, unleſs you intend by augmenting the quantity and weight of the Maſs, that we ſhould proportionably increaſe the Doſe of the Pills. Nor is it to be wondred at, that inſtead of two Drams of each of thoſe Juices we have ſet down half an Ounce, having a regard to the moiſture that remains in them, after they are only boil'd to the Conſiſtence of Honey.

Theſe Pills purge univerſally all the ill humours of the body. They are preſcrib'd for the Cure of Diſeaſes of the Head, Stomach, Liver, and all the Bowels, the Obſtructions whereof they open, and cary off all the ill humours. They are preſcrib'd alſo in long and complicated Agues, and in ſeveral obſtinate Diſeaſes. Their Doſe and manner of taking is the ſame with Agaric-Pills. They are alſo to be kept in an oyl'd Skin.

Pilulæ de Ammoniaco *Quercetani.*		*Ammoniac Pills of* Quercetan.	
℞. *Extracti Aloes Succotrinæ cum ſucco Roſarum parati,*	℥ iiij.	℞. Extract of Aloes Succotrine prepar'd with Juice of Roſes,	℥ iiij.
Gummi Ammoniaci puriſſimi,	℥ vj.	The pureſt Gum-Ammoniac,	℥ vj.
Myrrhæ elect.	℥ ß.	Choice Myrrh,	℥ ß.
Pulveris Diatrion Santalon,		Powder of the three Saunders,	
Maſtiches elect. an.	℥ j ß.	Maſtich choſen, *an.*	℥ j ß.
Croci,		Saffron,	
Salis Fraxini,		Salt of Aſh,	
Abſinthii, an.	℈ ij.	Wormwood, *an.*	℈ ij.

Reduce into very fine powder apart the Myrrh, the Maſtich, and the Saffron. After which having moderately heated a large Braſs-Mortar and Peſtle, melt therein the Gum-Armoniac, and having ſoften'd it with never ſo little Vinegar of Squills, add thereto the Extract of Aloes prepar'd, as directed in the Third Part of this Pharmacopœa among the Extracts. Then add the Salts of Wormwood and Aſh, the Myrrh, the Maſtich, and the Saffron pulveriz'd, and mix'd with the Powder of Saunders, and as much of the pale Roſes as is neceſſary. And to make the mixture more exact, beat the whole Maſs in the ſame Mortar, till the Maſs be rather a little too ſoft than too hard, as being apt to dry if kept too long.

Theſe Pills are highly commended for the purging of ill humours from all parts of the body. They are adminiſtred with good ſucceſs in Obſtructions of the Liver, the Spleen and Meſentery, and long Agues that proceed from thence. They are effectual in Cachexies, and particularly to carry off the impurities of the Matrix, and to give the retain'd Menſtruums the ordinary courſe. Their Doſe is from one Scruple to two: And ſometimes to a Dram for ſtrong Conſtitutions. They are to be taken in a morning faſting, and may be re-taken and continued as occaſion requires.

Pilulæ Cochicæ.	*Cochiæ Pills.*
℞. *Specierum Hieræ ſimplicis,*	℞. Powders of ſimple Hiera,
Turbith electi,	Choice Turbith,
Trochiſcorum Alhandal,	Alhandal Trochisks,

Diagrydii, an.	℥ ß.	Diagrydion, *an.*	℥ ß.
Olei Stillatitii Stoechados, vel Lavendulæ,	℈ j.	Diſtill'd Oyl of Caſſidony, or Lavender,	℈ j.

Make up the Maſs with Juice of Wormwood, thick'nd to the Conſiſtence of Honey.

There are ſeveral Receipts of theſe Pills under the Names of Great and Leſſer, which differ very much as to the Ingredients and Doſes. Caſſidony is preſcrib'd in ſome, omitted in others, as alſo the Turbith. The Powder of Hiera is ſometimes in a leſſer, ſometimes a greater Doſe. But the diſtill'd Oyls of Caſſidony or Lavender are quite left out, while they only uſe Syrup of Caſſidony or Wormwood to incorporate all the reſt. But we thought that the diſtill'd Oyls of Stœchas or Wormwood would afford more vertue then the five Drams of dry Stœchas, ſerving to no other end then to ſwell up the Maſs of the Pills. We thought alſo that it was to no purpoſe to vary the Doſes of the dry Medicaments, of which theſe Pills are compos'd, in regard they all tend to one end, and help to aſſiſt one another. We have alſo choſen the liquid Extract of the Wormwood before the Syrup, the better to fortifie the Stomach and Liver, during the Operation of the Pills, and more proper to make them keep.

Theſe Pills purge very powerfully all ill humours. And they deſerve to be us'd as well for the eaſineſs of their Preparation, as for the good Effects which may be expected from them, by cleanſing the Head, Stomach, and all the Bowels from their ſuperfluities: And they are to be taken in the morning faſting, or after the firſt ſleep.

Pilulæ de Cynogloſſo.

Pills of Hounds-tongue.

℞. *Myrrhæ electæ,*	℥ vj.	℞. Choice Myrrh,	℥ vj.
Olibani,	℥ v.	Olibanum,	℥ v.
Radicis Cynogloſſi ſiccæ,		Root of Hounds-tongue,	
Seminis Hyoſcyami Albi,		Seed of white Henbane,	
Extracti Opii, an.	℥ ß.	Extract of Opium, *an.*	℥ ß.
Croci,		Saffron,	
Caſtorei,		Caſtor,	
Reſinæ Styracis, an.	℥ j ß.	Roſin of Storax, *an.*	℥ j ß.

Gather the Root of Hounds-tongue in the Spring-time, when it begins to put forth its Leaves, and having cleans'd and dry'd it, powder it very finely with pure Caſtor and the Henbane-ſeed; beat the Saffron apart, as alſo the Myrrh and the Olibanum; and having prepar'd the Extract of Opium ſomewhat ſoft, heat a large Braſs-Mortar with a Peſtle, and melt the Roſin of Storax therein; and having incorporated the Extract of Opium with it, add the Powders thereto, mixing as much Syrup of Caſſidony, as will ſerve to reduce the whole into a Maſs ſomewhat ſoft, which muſt be beaten a good while in the Mortar, to make the Mixture perfect. Then put up the Maſs in an oyl'd Skin.

Criticks make Objection againſt this Preparation, becauſe of the Seeds of Henbane. I confeſs the whole Plant of Henbane is accounted very Narcotic, and that of all the ſorts they never uſe in Phyſick any but that which bears the white Seed. I know likewiſe that the Roots of Henbane eaten, deprive men for a time of their ſenſe and reaſon: But beſides that the Seed is that part of the Plant which operates moſt gently, and for that the uſe of it is very frequent in Perfumes to be held in the Mouth for the Tooth-ach, the quantity here preſcrib'd is ſo ſmall, and ſo well corrected, that there is no fear of any ill Effect.

Theſe Pills are very much commended for ſtopping the Defluxions from the Brain upon the Breaſt and lower parts, as alſo upon the Eyes and Teeth. They eaſe the pains, procure ſleep, and carry off the Acrimony of the Humours that interrupt it. They are to be taken at a diſtance from eating-time, and at any hour as occaſion ſerves. The ordinary Doſe is from two Grains to ten. You may alſo diſſolve a Scruple or half a Dram in Glyſters to give eaſe in Dyſenteries, or violent Cholicks.

Pilulæ

Pilulæ Fœtidæ.		The Stinking Pills.	
℞. *Sagapeni,*		℞. Sagapen,	
Ammoniaci,		Ammoniac,	
Opoponacis,		Opoponax,	
Bdellii,		Bdellium,	
Trochiſcorum Alhandal,		Alhandal-Trochisks,	
Seminis Rutæ,		Rue-Seed,	
Aloes Succotrinæ,		Aloes Succotrine,	
Epithymi, an.	℥ v.	Epithyme, *an.*	℥ v.
Turbith electi,	℥ ß.	Turbith elect,	℥ ß.
Diagridii,		Diagrydion,	
Radicis Eſulæ aceto præparat.		Spurge-Root prepar'd with Vinegar,	
Hermodactylorum, an.	℥ ij.	Hermodactyles, *an.*	℥ j.
Zinziberis,	℥ jß.	Ginger,	
Cinamomi,		Cinamon,	
Spicæ Nardi,		Spikenard,	
Caſtorei, an.	℥ j.	Caſtoreum, *an.*	℥ j.

Also Fœtidæ ℥ iij

Cleanſe and waſh the Spurge-Root, and having ſprinkl'd it ſlightly with Vinegar, dry it, then beat it in a great Braſs-Mortar among the Turbith, the Hermodactyles, the Ginger, the Cinamon, the Spikenard, the Caſtor and the Trochisks, to which you may add the Bdellium, and ſome ſmall part of the Gums which are to be in tears. Beat the Saffron apart as alſo the Diagrydion and Aloes as before directed. Then draw forth and depurate about four ounces of the Juice of Leeks, and having mingl'd them with their weight in Honey, boyl them together to the conſiſtency of a ſoft Electuary and take off the Scum. Then heat the great Braſs-Mortar and Peſtle, and having melted the Gums which were not put into the Powder, and incorporated the weight of Honey prepar'd, add the Powders by degrees, and as much Honey as is neceſſary to reduce the whole Maſs to an indifferent conſiſtence; and beat it a good while in the Mortar.

Euphorbium is known to be ſo violent and miſchievous in its operation, that no man can wonder I ſhould leave it out in theſe Pills, though I find it in all the Receits of the fetid Pills in other Diſpenſatories. We had alſo the more reaſon to omit it, in regard we do not find that theſe Pills have any want of Ingredients conducing to the purpoſes for which they were deſign'd, which are to purge vigorouſly and carry away ill Humours, as conſiſting of Trochisks of Alhandal, Diagrydion, Spurge-Roots, Hermodactyles and Aloes, whoſe vertues are corroborated by the Opoponax, Sagapen, Ammoniac and Bdellium; which at the ſame time ſerve alſo as Correctives to thoſe violent Purgers.

Fetid Pills are chiefly commended for the purging of thick and viſcous Flegm, and to remedy thoſe Diſeaſes that proceed from it, as Gouts and Rheumatiſms, and all Diſeaſes of the Joynts. Theſe are alſo good againſt Diſeaſes of the Stomach and Inteſtines, which proceed from the ſame Humours. They are alſo prevalent againſt the Leproſie, and all deformities of the Skin, but particularly to provoke the Menſtruums, to cleanſe the Matrix, and diſpel the vapours thereof. Their Doſe is from a ſcruple to a dram. They are taken as other Pills; and ſometimes ty'd up in little knots to ſmell to, to repreſs the Vapours of the Matrix.

Pilulæ Ruffi.		*Ruffius Pills.*	
℞. *Aloes Succotrinæ electæ,*	℥ ij.	℞. Aloes Succotrine,	℥ ij.
Myrrhæ,	℥ j.	Myrrhe,	℥ j.
Croci,	℥ ß.	Saffron,	℥ ß.

Pulverize the Aloes, Myrrh and Saffron, every one apart, and having mix'd the Powder in a great Braſs-Mortar, reduce it into a Maſs with as much good Malmſey as ſhall be needful to bring it to a good conſiſtence, and after you have beat'n it a good while put it up.

Some have giv'n theſe Pills the name of Peſtilential, others have call'd them Common Pills. They gently and as it were inſenſibly purge off the Impurities of the Stomach, they prevent the putrefaction of Humours, for which reaſon they are very much

commended in the Sickneſs-time, and againſt Epidemic diſtempers. They may be taken before Dinner, or going to Bed, or in the Morning faſting. Their doſe is different, according to the intention for which you take them: For if it be only to keep the Belly open, the doſe is from a ſcruple to a dram; but if it be for ſtronger Operation, you may give a dram, or a dram and a half to perſons of a ſtrong Conſtitution, to be taken after the firſt ſleep, or in the Morning early.

Pilulæ Aureæ.		*Golden Pills.*	
℞. *Aloes Succotrin.*		℞. Aloes Succotrin,	ʒ v.
Diagrydii, an.	ʒ *v.*	Diagrydion,	
Roſarum rubrarum mundat.		Red-roſes cleans'd,	
Seminis Apii, an.	ʒ *ij* ß.	Parſley-ſeed, *an.*	ʒ ij ß.
Maſtiches,		Maſtich,	
Seminis Aniſi,		Anniſeed,	
Feniculi, an.	ʒ *j* ß.	Fennel-ſeed, *an.*	ʒ j ß.
Trochiſcorum Alhandal,		Alhandal Trochisks,	
Croci, an.	℈ *j.*	Saffron, *an.*	℈ j.

Beat together the Parſley, Aniſe, and Fennel-ſeeds, with the Trochisks of Alhandal, and Red-roſes, and ſift the Powder through a Silk-ſieve. Pulverize a-part the Diagrydion, Maſtich, and Saffron; then having well mix'd all the Powders, incorporate them with as much Syrup of Roſes as is neceſſary to make the maſs of a good conſiſtence, which muſt be beaten a good while.

The Epithete of *Golden* is given to theſe Pills, becauſe of their colour; they purge gently Flegmatic and Choleric humours from all parts of the body; they are preſcrib'd to cure the Diſeaſes of the Stomach and Inteſtines, eſpecially when they are replete with Wine: Their doſe is from a ſcruple to a dram, to be tak'n after the firſt ſleep, or early in the morning.

Pilulæ ſine quibus.		*Pills without which I would not be.*	
℞. *Extracti Aloes Succotrinæ cum ſucco pallidarum Roſarum parati,*	ʒ *xiiij.*	℞. Extract of Aloes Succotrin prepar'd with Juice of pale Roſes,	ʒ xiiij.
Diagrydii,	ʒ *vj.*	Diagrydion,	ʒ vj.
Agarici Albiſſimi,		Whiteſt Agaric,	
Rhabarbari electi,		Choice Rhubarb,	
Foliorum Sennæ mundat. an.	℥ ß.	Leaves of Senna cleans'd,	℥ ß.
Roſarum rub. exungulatarum,		Red-roſes cleans'd,	
Summitatum Abſinthii,		Tops of Wormwood,	
Seminis Violarum,		Seeds of Violets, and	
Cuſcutæ,		Dodder,	
Maſtiches, an.	ʒ *j.*	Maſtich, *an.*	ʒ j.

Bruiſe in a great Braſs-Mortar the Rhubarb with the Senna, the Agaric, the Red-Roſes, the Wormwood, the Dodder, and the Violet-ſeeds: Pulverize a-part the Diagrydion, and the Maſtich; and having depurated about four ounces of the Juice of Fennel, and boil'd it to an Electuary with its weight in fair Honey, heat the great Braſs-Mortar and Peſtle; and having melted the Extract of Aloes therein, and incorporated it with ſome part of the Syrup of Fennel, put in the Powders by degrees, adding thereto as much of the Syrup of Fennel as is needful to reduce the whole to a ſufficient maſs, and beat the whole a good while in the Mortar.

Theſe Pills are variouſly preſcrib'd in ſeveral Diſpenſatories, eſpecially as to the quantities of the Medicaments: But they that will take the pains to conſider this Receipt, muſt acknowledge that it is not inferiour to any of the reſt, provided it be well prepar'd.

The good effects which theſe Pills have wrought, have won them the Title of *Sine quibus eſſe nolo, Without which I would not be.* They purge Flegm wonderfully, and both Cholers; they are very prevalent againſt Diſeaſes of the Head, eſpecially thoſe of

of the Eyes and Ears: They are to be taken after the first sleep, or in the morning fasting. Their dose is from a scruple to a dram, and sometimes to four scruples.

Pilulæ de Rhabarbaro.		*Rhubarb-Pills.*	
℞. *Specierum Hieræ picræ,*	ʒ x.	℞. Composition of bitter Hiera,	ʒ x.
Rhabarbari Electi,		Rhubarb chosen,	
Myrobalanorum Citrin.		Yellow Mirobalans,	
Trochiscorum Diarrhodon,		Trochisks of Roses,	
Succi Absinthii inspissati, an.	ʒ iij.	Juice of Wormwood thick'nd, *an.*	ʒ iij.
Succi Glycyrrhizæ,		Juice of Liquorice,	
Masticches,		Mastich,	
Seminis Apii,		Parsley-seed,	
Fœniculi, an.	ʒ j.	Fennel-seed, *an.*	ʒ j.

Beat in a large Brass-Mortar the Rhubarb, Mirobalans, Parsley and Fennel-seeds, the Trochisks, and the Juice of Liquorice, if dry; and having sifted the Powder through a Silk-sieve, and mix'd the Powders of Hiera with it, incorporate them in the great Marble-Mortar, with the Juice of Wormwood boil'd to the consistence of Honey, and as much Syrup of Fennel as is needful to reduce the whole mass to a good consistence, and then beat it a good while in the Mortar.

There is as much difference in the receipt of these Pills, as in any other that are met with in Dispensatories; which diversities require an Examination of this, the Ingredients whereof being as well chosen as proportion'd, I make no question will not fail to produce the good effects expected from them.

These Pills gently purge gross and viscous humours. It is often prescrib'd for the cure of long and painful diseases; for they open the most obstinate obstructions of the Liver and Spleen; they work good effects at the beginning of a Dropsie, and are of great advantage at the end of Tertian and Quotidian Agues. Their dose is from a scruple to four, taken in the same manner as *Pilulæ sine quibus.*

Pilulæ Stomachicæ.		[*Stomach-Pills.*	
℞. *Aloes Succotrinæ elect.*	ʒ j ß.	℞. Aloes Succotrine chosen,	ʒ j ß.
Rosarum rub. exungulat. &		Red-roses cleans'd, and	
Masticches elect. an.	ʒ ß.	Choice Mastich, *an.*	ʒ ß.

Pulverize the Aloes, Red-roses, and Mastich a-part; then mix them well, and incorporate them in a great Brass-Mortar with as much Syrup of Wormwood as is necessary to reduce them to a mass of a reasonable consistence, and put it up, being sufficiently beaten together.

There are several Receipts of Stomach-Pills to be met with in Dispensatories, but the plainest of all seems to be the best.

These are call'd Stomach-Pills, because they cleanse the Stomach from all fowlness, strengthening it, and rendring it capable to perform all its Functions. They are also call'd Pills *before Meat*, because they are usually taken before Meals, and require no Regiment at all. They cause but little Evacuation at a time, and are therefore giv'n in a small dose, from one scruple to half a dram. You may take them as often as you find occasion.

Pilulæ Hystericæ.		*Hysteric-Pills.*	
℞. *Facularum Brioniæ,*		℞. The Fæcula, or white Juice of Briony,	
Myrrhæ Electæ,		Choice Myrrh,	
Vitrioli Martis,		Vitriol of Iron,	
Salis Arthemisiæ, an.	ʒ ij.	Salt of Mug-wort, *an.*	ʒ ij.
Castorei electi,		Choice Castor,	
		Rutæ,	

Rutæ,	Rue,
Camphoræ, an. ℈ ij.	Camphire, *an.* ℈ ij.
Extracti mollioris Aloes cum ſucco Arthemiſiæ parati, ʒ x.	Soft Extract of Aloes prepar'd with juice of Mugwort, ʒ x.

Beat the Caſtor cleans'd, together with the Rue and one part of the Myrrh, the reſt of which muſt be beaten, as alſo the Camphire, mingling with the latter a drop or two of Spirit of Wine, the more eaſily to powder it. You muſt have the Extract of Aloes ready, as I ſhall direct in due place, and when it is brought to a conſiſtence ſomewhat ſoft, put it into a great Braſs-Mortar; and having mix'd with it the Vitriol of Mars, the Salt of Mugwort and the white juice of Briony pulveriz'd, with the reſt of the Powders, reduce the whole into a Maſs, which muſt be carefully beaten in the ſame Mortar for a good while. If the Extract of Aloes ſhould want moiſture to ſuck up the Powders, ſupply the defect with honey of ſtinking Arrach, adding what is requiſite.

The Extract of Aloes ſhould be prepar'd with juice of Roſes, according to ſome Receits of theſe Pills; but we thought it more convenient to make uſe of Juice of Mugwort, to avoid the contrary effects which the ſweet ſcent of Roſes might produce in ſome Women.

You ſhall find in the ſmall quantity of Drugs which compoſe theſe Pills, more ſatisfaction as to the purpoſes, for which they were invented, then in any other Receits. For it is not generally the great number, but the choice of the Ingredients that makes the goodneſs of the Compoſition.

Theſe Pills are not only Specificks to ſuppreſs the Vapours that riſe from the Matrix, and to calm the diſorders and ſymptoms that many times happen; but alſo to carry off its impurities, and to provoke the Menſtruums retain'd; to which purpoſe they muſt be taken for ſeveral days. The Pills muſt be taken in a a morning faſting, drinking after them three or four ounces of Mugwort-water, and walk gently upon it for an hour, not taking any thing in two hours after. The Doſe is not above half a dram, becauſe of the continuance in taking.

Pilulæ Meſentericæ, D. D. D' *AQUIN.*	*Meſenteric Pills of Monſieur D. D.* D' AQUIN.
℞. *Extracti Aloes cum ſucco Fumariæ parati, &*	℞. Extract of Aloes prepar'd with Juice of Fumitory, and
Gummi Ammoniaci elect. an. ʒ *j.*	Gum-Ammoniac, choſen, ʒ j.
Croci Martis aperientis, &	Opening Crocus-Martis, and
Diagrydii, an. ʒ ß.	Diagrydion, *an.* ʒ ß.
Myrrhæ elect.	Select Myrrh,
Croci, &	Saffron, and
Salis Tamariſci, an. ʒ *ij.*	Salt of Tamarisk, *an.* ʒ ij.
Salis Martis Riverii, ℈ *ij.*	Salt of Mars of *Riverius,* ℈ ij.

Having pulveriz'd the Myrrh, the Saffron and the Diagrydion every one apart, and prepar'd an Extract of Aloes ſomewhat ſoft, with the Juice of Fumitory, as I ſhall direct among the Extracts; moderately heat a great Braſs-Mortar and Peſtle, where after you have gently melted the Gum-Ammoniac in tears, and well incorporated it with the Extract of Aloes, add the Powders by degrees, mix'd together before with the Crocus-Martis, and Salts of Mars and Tamarisk: adding to them as much Syrup of Succory compos'd with Rhubarb as ſhall be neceſſary to reduce the whole into a Maſs of a midling conſiſtence, which muſt be beaten a ſufficient time in the great Mortar. Put up the Maſs in an oil'd Skin.

Monſieur the Kings chief Phyſitian has giv'n the name of *Meſenteric* to theſe Pills, becauſe they powerfully open the obſtructions which they meet with in the Meſentery. They are very prevalent againſt the obſtructions of all the other Bowels. For they diſſolve the tartarous matters, and purge very gently, yet fortifie the Nutritive parts. For which reaſon they may be preſcrib'd with ſucceſs in Cachexies, Dropſies, Chronical intermitting Fevers, retentions of the Lunary Purgations, *&c.* Their doſe is from one ſcruple to a dram if you deſire they ſhould work ſoundly: otherwiſe half a dram is enough for Perſons of midling complexions that muſt continue to uſe them.

Pilulæ

Pilulæ Mercuriales.	*Mercurial Pills.*
℞. *Rhabarb. electi,*	℞. Select Rhubarb,
Trochiſcorum Alhandal,	Alhandal Trochisks,
Diagrydii, &	Diagrydion,
Mercurii ſublimati dulcis, an. ℥j.	Sweet-Mercury ſublimate, *an.* ℥j.
Terebinthinæ Venetæ, oleo proprio ſtillatitio diluta, q. ſ.	Venice-Turpentine waſh'd in its own diſtill'd Oyl, q. ſ.

Beat in a great Braſs-Mortar the Rhubarb with the Trochisks of Alhandal, mixing therewith ſome cold ſeed cleans'd: Pulverize apart the Scammony, and the *Mercurius Dulcis*, and having ſifted the Powders through a Silk-ſieve, and well mix'd them in a great Marble-Mortar, incorporate them with the Venice-Turpentine waſh'd in a little of its own diſtill'd Oyl, and reduce the whole into a maſs of a good conſiſtence, which muſt be beaten a good while in the ſame Mortar.

There are no Pills now-a-days more us'd then the Mercurial; and though there be a great number of Receipts in moſt of the Diſpenſatories at this time, particular Receipts of private perſons are yet far more numerous. I omit the various preparations which they uſe, and the different Correctives or Aſſiſtants which they mix with their Mercury: But I dare be confident, that this Receipt, though but a plain Compoſition, is as well proportion'd as can be deſir'd, and that a better can hardly be found.

Theſe Pills are chiefly deſign'd for the cure of Venereal diſtempers. They draw the virulent humours from all parts of the body, and carry them off by the Stool, though ſometimes they raiſe a Salivation to ſome tender perſons, and find out ſome part of the Venom at the Mouth, wherein the Prudence of the Phyſitian is very requiſite to quicken or retard the effects, as occaſion requires; and to let Nature take its own courſe, according to the Conſtitution of the Patient, and the ſtate of the diſtemper. The doſe of theſe Pills is from one ſcruple to two, to be taken generally in the morning faſting, and to be continu'd as neceſſity requires.

Pilulæ ad ſiſtendam Gonorrhæam,	*Pills to ſtop a Gonorrhœa.*
℞. *Radicum Biſtortæ,*	℞. Roots of Snakeweed,
Tormentillæ,	Tormentil,
Nymphææ,	Water-Lilly,
Baccarum Hederæ,	Ivy-Berries,
Seminum Lactucæ,	Seeds of Lettice,
Rutæ,	Rue,
Agni Caſti,	Chaſt-Tere,
Succini,	Amber,
Sanguinis Hirci,	Goats-blood,
Maſtiches,	Maſtich,
Olibani,	Olibanum,
Lachrymarum ſanguinis Draconis,	Tears of Dragons-blood,
Nucis Moſchatæ, an. ℥ß.	Nutmegs, *an.* ℥ß.

Beat together in a great Braſs-Mortar the Roots of Tormentil, Snake-weed, and Water-Lilly, with the Ivy-Berries, the Seeds of Lettice, Rue, and *Agnus Caſtus*, the Goats-blood, the Dragons-blood, the Amber, and the Olibanum: Pulverize the Maſtich apart, and having well mix'd all the Powders, heat a great Braſs-Mortar and Peſtle, and incorporate them with the Venice-Turpentine, and reduce the whole into a maſs of a good conſiſtence, beating it for a good while in the ſame Mortar.

Dragons-blood is a Gum that cometh forth out of a Tree, when it is cut or bor'd, that grows in the *Canary-Iſlands*, and produces a fruit like a Cherry, of a ſowriſh taſte, and a yellowiſh colour. The Gum when it is bruis'd is of a Crimſon and bloody colour, whence it has the name of Dragons-blood: But have a care of the counterfeit Dragons-blood, which is only made of Cherry-tree and Almond-tree Gums, diſſolv'd and boil'd in the tincture of Brazile-wood, which gives it a red colour, and is us'd by none but Farriours.

The

The number of Aſtringent is no leſs then that of Mercurial Pills, and every one may eſteem and prepare thoſe he likes beſt; but there is no queſtion to be made of this, provided the Ingredients be right, and that it be carefully prepar'd; provided alſo, it be not given till the malignity of the diſtemper be over, and that it be time to ſtop the Gonorrhæa. Theſe Pills are to be tak'n morning and evening, but ſtill upon an empty Stomach, and continu'd for ſeveral days, eſpecially if the Veſſels be debilitated. The doſe is from half a dram to a dram.

But becauſe we meet many times with obſtinate Gonorrhæa's, difficult to cure, I thought fit to inſert here the following Receipt; the Pills be very proper to eradicate all the ill impreſſions of Venom, that other Remedies could not overcome.

Pilulæ contra Gonorrhæam virulentam.	*Pills againſt a Virulent Gonorrhæa.*
℞. *Antimonii Diaphoretici nuper parati, &*	℞. Diaphoretic Antimony newly prepar'd, and
Cinnabaris Nativæ, &	Mineral Cinnabar, and
Antimonii,	Of Antimony,
Terræ Sigillatæ,	Terra Sigillata,
Radicis Ireos Florentiæ,	Root of Florence-Orrice,
Liquoritiæ,	Liquorice,
Succini Albi, &	White-Amber, and
Oculorum Cancrorum præparatorum, an. ℥ß.	Crabs-eyes prepar'd, *an.* ℥ß.
Myrrhæ electæ,	Select Myrrh,
Olibani,	Olibanum,
Maſtiches, &	Maſtich,
Croci, an ʒ *ij.*	Saffron, *an.* ʒ ij.

Make choice of the cleaneſt Mineral Cinnabar, and the moſt weighty you can meet with; grind the white Amber and Crabs-eyes upon Porphyrie: Pulverize the Myrrh a-part, as alſo the Maſtich in drops, the Olibanum, the Saffron, the Cinnabar Mineral, and Cinnabar of Antimony, as alſo the Diaphoretic Antimony: beat together in the great Braſs-Mortar, the Roots of Orrice and Liquorice; and having ſifted and well mingl'd them, heat the great Mortar and Peſtle moderately hot, and incorporate them with Turpentine, to reduce the whole into a convenient maſs; and then beat the maſs together again for a good while.

Theſe Pills work wonderful effects for the cure of Gonorrhæa's, eſpecially when general Remedies have preceded: They are to be taken Morning and Evening upon a faſting Stomach, and continu'd, according as the diſtemper is, for ſome Weeks: For which reaſon the doſe is but half a dram at a time, though two ſcruples or a dram may be giv'n, to make them work more quickly, and with more force. The effect of theſe Pills is imperceptible, till us'd for ſome time.

Pilulæ de Terebinthina cocta.	*Boil'd Turpentine-Pills.*
℞. *Terebinthinæ Venetæ in aqua Raphani, vel baccarum Alkekengi ad duritiem coctæ,* ℥ *iiij.*	℞. Venice-Turpentine boil'd to a hardneſs in water of Radiſhes, or Alkekengi-berries, ℥ iiij.
Liquoritiæ mundatæ ſubtiliter pulveratæ, ℥ *j.*	Liquorice cleans'd and finely powder'd, ℥ j.

Boil the Turpentine over a ſoft fire in the diſtill'd water of Radiſhes, or Alkekengi-berries, or ſome other Diuretic Plant, till it be ſo hard, that you may make it into Pills: Then pour away all the water from the Turpentine, and before it be cold, incorporate with it the Liquorice finely powder'd; and having wrought them well together, put up the maſs for uſe.

Theſe Pills are very much us'd upon retention of Urine, whether caus'd by Flegm, or Gravel, or any Venereal Malignity. They are alſo good at the beginning of Gonorrhæa's, to make them run. They are taken in a Morning faſting, from one dram to two, and may be taken ſeveral days together.

Pilulæ

Pilulæ pro morbo Colico D. D. D' AQUIN.		*Pills againſt the Colick of Mounſieur* D' AQUIN.	
℞. *Aloes elect. in ſucco Roſarum pallidarum diluta & inſpiſſata,*	℥ iij.	℞. Select Aloes ſteep'd in Juice of pale Roſes, and thick'nd,	℥ iij.
Agarici elect.	℥ j ß.	Select Agaric,	℥ j ß.
Extracti Rhabarbari,	℥ j.	Extract of Rhubarb,	℥ j.
Hepatis Lupi præparati,	ʒ vj.	Wolfs-liver prepar'd,	ʒ vj.
Summitatum Abſinthii,	℥ ß.	Tops of Wormwood,	℥ ß.
Pulveris Diarrhodon Abbatis		Powder of Roſes of the Abbot,	
Salis Abſinthii, &		Salt of Wormwood, and	
Nucis Moſchatæ, an.	ʒ j ß.	Nutmeg, *an.*	ʒ j ß.

Look for the preparation of the Extracts of Aloes and Rhubarb in the following Part. Take the Liver of a Wolf newly kill'd, and having taken out the Gall, and waſh'd the Liver in White-wine, put it into a glaz'd Earthen-pot; and having well luted on the Cover, ſet it in a Bakers Oven, after the Bread is drawn: Cloſe the Oven, and leave it there for ſome hours. Then unlute the Cover, and turn the Liver: Lute the Cover on again, and put the Pot in once more when the Bread is drawn, and let it ſtand as long as at firſt; and thus do ſo often, till the Liver be thoroughly dry, to be kept in a dry place for fear of corrupting. Beat in a great Braſs-Mortar the Wormwood, with the Agaric and Nutmegs, and the Wolfs-Liver; and having ſifted the Powder through a Silk-ſieve, heat the great Braſs-Mortar and Peſtle, and melt therein, by degrees, the Extracts of Aloes and Rhubarb; and incorporate them afterwards with as much Syrup of Succory as is requiſite to reduce the whole into a maſs of a good conſiſtence, which muſt be afterwards well beaten in the ſame Mortar.

The good effects which are wrought by theſe Pills for the cure of Colics, eſpecially thoſe of *Poictou*, oblig'd Mounſieur D' *Aquin*, his Majeſties Chief Phyſitian, to add the Receipt of them to many others in this *Pharmacopœa* for the Public Good. They gently purge choleric and ſerous humours, the gathering together and Fermentation whereof they divert and prevent, as being the uſual cauſe of Colics: They that are ſubject to them, are to take every other day one, and to continue them till they are cur'd. Theſe Pills keep the Belly op'n, and carry off gently and inſenſibly the humours that cauſe them. The doſe of theſe Pills may be augmented to a dram, if you intend a ſtrong Evacuation. They muſt be tak'n in a morning faſting.

Pilulæ Catholicæ *Poterii.*		*Univerſal Pills of* Poterius.	
℞. *Aloes Succotrinæ,*	℥ ß.	℞. Aloes Succotrine,	℥ ß.
Myrrhæ Electæ.	ʒ ij.	Select Myrrh,	ʒ ij.
Maſtiches Electi,	ʒ j.	Select Maſtich,	ʒ j.
Croci,	ʒ ß.	Saffron,	ʒ ß.
Magneſiæ Saturninæ meteoriſatæ,	ʒ j.	White-flowers of Antimony,	ʒ j.

Chuſe your Ingredients well; and having pulveriz'd every one a-part, ſifted them through a Silk-ſieve, and well mix'd them, incorporate them with as much Syrup of Roſes Solutive, as is requiſite to give the Maſs its due conſiſtence, and beat the whole in the ſame Mortar for a good while.

I thought fit to inſert theſe Pills, becauſe of the good effects which they may produce. The white Flowers of Antimony, diſguis'd by *Poterius* under the Name of *Magneſia Saturnina meteoriſata*, are only a powerful Spur to the other Ingredients: And though they are very Emetic alone, yet thus mix'd, they loſe that quality, and purge only by Stool. The preparation of theſe Flowers you ſhall find in the Third Part of this *Pharmacopœa.*

Poterius, the Author of theſe Pills, commends them highly againſt Colics, Aſthma's, Megrims, Vertigo's, Epilepſies, and alſo for the eaſe of the Gout: Their doſe is from fifteen grains to twenty four: They are to be taken in a morning faſting.

Pilulæ Hydropicæ *Bontii.*

℞. *Aloes Succotrinæ*, ℥ ij ß.
Gummi Guttæ ſubtiliter pulverat & cum Vino Malvatico diſſolut. lævigati, & ſiccati, ℥ j ß.
Diagrydii eodem modo parat. ℥ j.
Gummi Ammoniaci Electi, ℥ j ß.
Tartari Vitriolati, ℥ ß.

Bontius's *Hydropic Pills.*

℞. Aloes Succotrin, ℥ ij ß.
Gutta-gauma finely powder'd, diſſolv'd with Malmſey, ſmooth'd, and dry'd, ℥ j ß.
Diagrydion ſo prepar'd, ℥ j.
Select Gum-Ammoniac, ℥ j ß.
Tartar Vitrioliz'd, ℥ ß.

Beat the Aloes in a great Braſs-Mortar, and ſift it through a Silk-ſieve: Pick out the pureſt Gutta-gauma, and the faireſt Diagrydion; and having grownd them very fine upon Porphyry, either together, or a-part, with about the ſame weight in Malmſey, ſet them to dry: Then having made choice of pure Ammoniac in tears, and moderately heated the great Mortar and Peſtle, melt the Gum therein; then mixing the Tartar vitrioliz'd with all the Powders, and moiſtning the Ammoniac with about as much the weight of Syrup of Roſes Solutive, incorporate them by degrees, ſtill adding as much more of the Syrup as is requiſite to bring the maſs to its due conſiſtence, which muſt be afterwards beaten a good while in the ſame Mortar.

You ſhall find the preparation of vitrioliz'd Tartar in the Third Part of this *Pharmacopœa.*

Theſe Pills were invented by *Bontius*, formerly Phyſitian to the Prince of *Orange*, who commends them highly for the carrying off all Hydropic waters. They are very effectual to open Obſtructions of the Liver, Spleen, and all the Bowels. It is to be taken in a morning faſting, from half a ſcruple to a ſcruple.

Pilulæ Tartareæ *Bontii.*

℞. *Aloes Succotrinæ elect.* ℥ iij.
Lachrymarum Gummi Ammoniaci pauco aceto ſcillitico dilutarum, ℥ j ß.
Tartari Vitriolati, ℥ ß.

Tartar-Pills of Bontius.

℞. Aloes Succotrine ſelected, ℥ iij.
Tears of Gum-Ammoniac diſſolv'd in a little Vinegar of Squills, ℥ j ß.
Tartar vitrioliz'd, ℥ ß.

Having finely pulveriz'd the Aloes, heat a Braſs-Mortar to melt the Gum-Ammoniac, being there diſſolv'd in a little Vinegar of Squills; then incorporate the Aloes, and the Tartar vitrioliz'd, and reduce the whole maſs to its due conſiſtence, beating the ſame a good while together.

There are ſeveral Receipts of Tartar-Pills; among the reſt, one that conſiſts of many Ingredients, in *Quercetan*, which perhaps might be to be preferr'd before this, if multiplicity of Ingredients made a Receipt good or bad. However we have choſen this, as being plain and eaſily prepar'd; for theſe Pills purge wonderfully both the one and the other Choler, and thick and tartarous humours, carrying them off from the remoteſt parts of the body. They are preſcrib'd with ſucceſs againſt Madneſs, and melancholy diſtempers, that ariſe from the Hypochondriums, againſt the Leproſie, Cankers, Quartan Agues, and Venereal diſtempers. For by opening the obſtructions of the Bowels, and voiding the ill humours, they purge the whole maſs of the blood. The doſe is from a ſcruple to a dram. They are to be taken in a morning faſting, or juſt before Dinner.

Pilulæ Tartareæ *Schroderi.*

℞. *Aloes Lucidæ in Succo-Targorum extract.* ℥ j.
Lachrymarum Gummi Ammoniaci, ℥ ij ß.
Magiſterii Tartari purgantis in aqua Buglossi aliquoties ſoluti & coagulati,
Extracti Gentianæ, an. ℥ ij.
Salis Martis ſubdulcis,
Extracti Croci, an. ℥ j.

Schroder's *Tartarous Pills.*

℞. Bright Aloes extracted, with Juice of Strawberries, ℥ j.
Gum-Ammoniac, ℥ ij.
Purging Magiſtery of Tartar diſſolv'd and coagulated in Bugloſs-water,
Extract of Gentian, *an.* ℥ ij.
Salt of *Mars* ſweet'nd,
Extract of Saffron, *an.* ℥ j.

Make up the Maſs with Tincture of Tartar.

Having

Having choſen the Aloes Succotrine, very tranſparent, draw forth the Extract with Juice of Strawberries, as I ſhall direct in the preparation of Extracts, where you ſhall alſo meet with thoſe of Gentian and Saffron. Magiſtery of Tartar, and tincture of Tartar, are to be found in their proper place, together with the preparation of the Salt of *Mars* of *Riverius*, which is moſt proper for theſe Pills, in regard that the Acid of the Spirit of Vitriol, neceſſary for the diſſolution of *Mars*, cannot be better ſweet'nd then by the Volatile of the Spirit of Wine, which is there made uſe of.

Schroderus writes, that after he had had the Receipt a good while, and found the Excellency of its Vertues, he was reſolv'd to communicate it to public view, as a proper Remedy to carry off tartarous and muſcilaginous humours from the lower part of the Belly, to cleanſe the Liver, Spleen, and Matrix from Obſtructions, and to cure all Diſeaſes that proceed from thence. Take them in the Evening before Supper, about half a ſcruple weight, and the next morning expect they ſhould work.

Pilulæ de Sagapeno *Camilli.*		*Sagapen-Pills of* Camillus.	
℞. *Lachrymarum Sagapeni,*	ʒ *vj.*	℞. Tears of Sagapen,	ʒ vj.
Ammoniac.	ʒ *iij.*	Ammoniac,	ʒ iij.
Extracti Trochiſch. Alhandal,	ʒ *j.*	Extract of Trochisks of Alhandal,	ʒ j.
Diagrydii,	ʒ ß.	Diagrydion,	ʒ ß.
Salis Gemmæ,	ʒ *j* ß.	Sal-Gemmæ,	ʒ j ß.

Powder the Diagrydion and Sal-Gemmæ, and having heated the Braſs-Mortar and Peſtle, melt the Gums by degrees: Then incorporate therewith the Extract of Alhandal, and the Powders, adding thereto as much Syrup of Violets, ſharp'nd with a little Spirit of Vitriol, as will ſuffice to reduce it to a good conſiſtency. Theſe Pills are applauded by *Camillus*, and after him by *Quercetan*, for the cure of a Quartan Ague, taking about the bigneſs of a Pea at the beginning of the Fit: For they inſenſibly diſſolve viſcous and tenacious humours, and carry them off by Stool.

I have not inſerted certain Pills ſet down, and commended by *Quercetan*, having Euphorbium for their Foundation: For though that *Quercetan*'s preparation of Euphorbium be as good, and as judicious as any that was ever invented; and that it be true, that the Acrimony of the Euphorbium, fix'd to its volatile parts wherein it abounds, cannot be more properly carri'd off, then by mixing thoſe Acids among it which he does, as Juice of Citron, or Spirit of Vitriol. Nevertheleſs, though the Volatiles may ſeem to have chang'd their nature, when joyn'd to the Acids, and intermix'd with their ſmalleſt particles; this ſtrict Union may at firſt hinder that operation which they were capable of before in ſeparation, but cannot deſtroy their firſt nature: So that when the Acid joyn'd to the Euphorbium meets in the Stomach with any new Volatile, not failing to mix with that as it had mix'd with the Euphorbium; and the latter finding it ſelf freed from the Union which it had with the Acid, is in that time in a condition to exerciſe its firſt Nature, and make the ſame havock it would have done before it was joyn'd, which cannot be help'd, unleſs it meets with ſome new Acids in the Stomach, which may, as it were, inebriate it ſo, that it may ſuffer it ſelf to be carri'd off by the other Laxatives, and voided with the Excrements, before it has done all the miſchief it would have done. Theſe reaſons make me ſtedfaſt in my Opinion, that it is better not to give Euphorbium by any means inwardly, then to endeavour to change its nature, which it is impoſſible to deſtroy, though it may be alter'd for a time.

I was unwilling to ſwell this Chapter with any more Receipts of Pills, which have been formerly more in uſe, and which every one has his liberty to chuſe as he pleaſes. For beſides that there is nothing particular in their preparation, I think I have already produc'd enough ſufficiently to furniſh any Apothecaries Shop.

THE SECOND BOOK, OF EXTERNAL PREPARATIONS, AND COMPOSITIONS.

CHAP. I.

Of Oyls Extracted by Preſſing.

THe Health of Man being the Common End for which all Medicines both Internal and External are made uſe of, and there being ſo great a Sympathy between them, that many which are rank'd among the number of the former, may alſo ſerve for the ſame uſes as the latter, it is impoſſible to divide Internal from External Compoſitions ſo well, but that there may be ſome ground of Exception. As may be obſerv'd in Confection of Alkermes, which is uſually giv'n inwardly to ſtrengthen the Heart and noble-parts; and which you may alſo for the ſame purpoſe, very advantageouſly apply outwardly like an Epitheme upon the Heart and Stomack: Or mix'd in Oyl of Scorpions, invented againſt Poyſons; which is chiefly made uſe of by way of Unction upon the Heart, Liver and Temples. However it is alſo taken inwardly for the ſame intent; not to ſpeak of other mix'd Bodies and other Compoſitions, which may prove uſeful both outwardly and inwardly giv'n. So that it is no wonder if among the Compoſitions which have at all times been rank'd among external, we meet with ſome that may be accompted internal, as being oft-times taken inwardly. Particularly many Oyls, eſpecially Sallet-oyl, which beſides the general external uſe that is made of it in dreſſing Meat, is often giv'n to drink alone or mix'd with other Medicaments.

Having by this means begun External Medicines with Oyls, I muſt ſay that the name of Oyl has been given to certain fat, oyly, combuſtible Liquors, that flow either naturally out of Rocks, as *Petroleum*; or from Plants, as Opobalſanum; or which is drawn by Art from divers mix'd Bodies, eſpecially thoſe which are of the number of Vegetables, the diverſity whereof is as great as the variety of ſubſtances from whence they are drawn. I do not comprehend under Oyls the Fat of Animals, though Unctuous and Inflammable, and that it be put ſometimes in the Compoſition of ſeveral Oyls, among ſeveral other parts of Animals; having deſign'd this Chapter principally for Oyls drawn forth by Preſſing, or by Decoction; or for thoſe to which we communicate the vertue of one or more mix'd Bodies, which are call'd either Simple or Compound. Referring Diſtill'd Oyls, and their Preparation to the third part of this *Pharmacopœa*.

Fruits, Berries, and Seeds are the parts of Plants that uſually abound moſt in Oyl; though the other parts are not quite deſtitute of it. But among all Fruits the Olive is that which yields moſt, and of which there is the greateſt plenty every-where. This Oyl is as much us'd in Dyet as in Phyſic, wherein the general uſe of it has been the reaſon it has receiv'd for excellency and priority of diſtinctions ſake, the name of Oyl, without the addition of Olives. This is one of thoſe Oyls that are drawn forth by preſſing.

The

The uſe of it is chiefly to retain or receive the virtue of ſeveral ſorts of Plants or Animals, of which it afterwards bears the name, ſerving as a foundation to a good part of the Simple and Compound Oyls, which are us'd to be prepar'd in Shops by Infuſion or Decoction.

Moſt Authors are of opinion that Oyl that has been longeſt made is to be preferr'd before any other for Phyſical uſes, ſo that ſometimes they preſcribe Oyl of a hundred years old. However the Inhabitants of the Countries where the Oyl is made, generally prefer new pure Oyl before any other; eſpecially for Diet, becauſe it is uſually more ſweet and more acceptable to the taſte: and though they do not deſpiſe that of two, three and four years old, they know by experience, that Oyl which has been kept beyond that time, grows at length ſo thick, and becomes ſo greaſie, that it is only fit for Unguents, Emplaiſters, or to make Sope.

The Ancients preſcrib'd the making of two ſorts of Oyl, and that the moſt uſual being drawn from Olives very ripe, there ſhould be another drawn from green Olives before they come to maturity, to which they give the name of *Oleum Omphacinum*, which they affirm to be much more aſtringent and cooling then the other, and which they made uſe of in the compoſition of Oyls and other Remedies that requir'd thoſe qualities. But we ſhould be now at a great loſs to find this *Omphacine*-Oyl, becauſe that green Olives are not in a condition to afford much Oyl, and for that in the Countries where Olives grow in greateſt abundance they know not what it is to draw forth Oyl from Olives that are not fully ripe. But though we have not this *Omphacine*-Oyl of the Ancients, the Oyl which is made of ripe Olives, cannot be inferior to it; in regard we may endue it with qualities very neer to thoſe which are attributed to *Omphacine*, by the means of Lotions or Infuſions impregnated with the qualities which they deſire, provided the Oyl be pure, and clarifi'd from all its bad qualities.

Oleum Amygdalarum dulcium.

℞. *Amygdalarum dulcium putaminibus, & cute membranoſa purgatarum, quantum libuerit.*

Oyl of Sweet-Almonds.

℞. Sweet-Almonds cleans'd from their Husks and Membranous-skins, what quantity you pleaſe.

Chooſe out new Almonds, well grown, out of their ſhells, well dry'd, and having ſifted the duſt from them through a coarſe Sieve, put them into hot-water; and keep them there till their Husks are well ſoak'd, that you may ſlip them off with your fingers; and having taken off the membranous-skin, wipe them in a Linen-cloth, and ſpread them abroad to dry. Then put them in a Marble-Mortar, and beat them with a Wooden-Peſtle, till the Pulp be very thin and begin to yield Oyl; put this Pulp into a Bag of new ſtrong linen: and after you have ty'd the mouth of the Bag, and put it between two thin Tin-plates, or of Wood lin'd with white Latten, put the whole into the Preſs, ſqueezing it very gently at firſt, but afterwards with a conſiderable ſtrength, leaving the Bag in the Preſs till the Oyl have time to drop forth. They who ſhould be too impatient at firſt, and ſhould preſs the Oyl of Almonds too ſtrongly at the beginning, would force the Feces of the Almonds through the Bag; and the Oyl would come forth thick, which by obſerving my directions never happens.

The Ancients were wont to heat the Almonds and ſuch other Fruits in *Balneo Mariæ*, or otherwiſe, after they had beat them, and before they put them into the Preſs, to get the more Oyl. I confeſs that more Oyl may be had this way, but it will be more unacceptable to the taſte and leſs cooling. However for ſome perſons not ſo nice, the beating of the Almonds may be omitted, provided they be well ſhaken in a Bag of new coarſe Cloath: by reaſon that then the Almond-pulp is leſs ſubject to paſs through the Bag, as being hindred by the rind, that gives it a firmneſs; nor is the Oyl leſs pleaſing to the taſte, or leſs ſightly to the eye.

Oyl of Sweet Almonds is very much commended againſt the roughneſs of the *Aſpera Arteria*, and the Lungs. It appeaſes Colicks, eſpecially the Nephretic, cures all retentions of Urine, facilitates the Labors of Women in Child-bed, and appeaſes their pains after delivery; aſſwages Coughs in young or old, and the Gripes of little Infants. In a word, it is generally proper for all internal Maladies, where there is occaſion to mollifie, aſſwage, make ſlippery or to qualifie the heat or acrimony of humours. It is us'd both inwardly and outwardly. It is given alone faſting; it is alſo mix'd with Looches, Syrups, Emulſions, and Potions. The doſe is from half an ounce to an ounce, and ſometimes to two: it is alſo us'd in pain-eaſing, and lubrifying Clyſters from two to three ounces.

It

It is alſo us'd externally alone, or mix'd with Pomatums or in Liniments, as well to ſmooth the Skin, as to ſoften and relax the Muſcles of the Breaſt, when they are oppreſt.

Oleum Amygdalarum amararum.	*Oyl of Bitter Almonds.*
℞. *Amygdalarum amararum quantum libuerit.*	℞. Bitter Almonds what quantity you pleaſe.

This Oyl may be prepar'd in the ſame manner as the ſweet Almonds; but becauſe they are ſeldom taken inwardly, the beating of them may be omitted without Scruple: otherwiſe they may be beaten and after that moderately heated; and the Plates may be alſo heated, when you put them into the Preſs: But they muſt be gently preſs'd at firſt, as I ſaid of the former. Their bitterneſs lies only in their groſs and terreſtrial part; ſo that the Oyl is as ſweet as that of other Almonds, the bitterneſs remaining in the fœces: Which though neither hurtful to men, nor to the moſt part of other Animals, is yet the moſt dangerous Poyſon that Poultry can meet with.

Oyl of bitter Almonds is very much eſteem'd againſt hardneſſes, inflammations, and ſtranglings of the neck of the Matrix. It alſo gives great eaſe to thoſe who are troubled in their Kidneys, by any gathering together of Flegm, Gravel, or Stone, or are pain'd through difficulty of Urine. It is good againſt pains in the head, deafneſs, noiſe in the Ears, to take away the blemiſhes of the Face, and roughneſs of the Skin, and white Scurfs. It is us'd outwardly alone, or mix'd with Pomatums; and inwardly adminiſter'd from half an Ounce to an Ounce alone, or mix'd in Emulſions or other Beverages. It may be alſo mix'd in Clyſters to expell wind, like as Oyl of ſweet Almonds.

Oleum Nucum Juglandium, & Avellanarum.	Oyl of Wallnuts and Filberts.

Oyls of Wallnuts and Filberts, are to be prepar'd in the ſame manner as Oyl of ſweet Almonds. You muſt alſo forbear to heat the Pulps, eſpecially when they are to be taken inwardly, or to be us'd for Coſmetics. For by that means they will be more agreeable to the taſte and ſmell, and be alſo more refreſhing.

Oyl of ordinary Wallnuts is recommended againſt all ſorts of Cholicks, eſpecially windy. It is alſo good againſt cruſhing and pricking of the Nerves, againſt the Itch, Tetters, and Swellings. It is alſo outwardly apply'd to anoint the Face againſt Sun-burning in the Month of *March*, by way of prevention: To which purpoſe they anoint the Faces of young Children newly born. The Doſe and uſes of it are much the ſame with thoſe of Oyl of ſweet Almonds: Yet ſometimes they uſe four Ounces, or half a Pint at a time in Clyſters, for violent Cholicks, mixing it with Urine and Spaniſh-Wine.

The Vertues of Oyl of Filberts are very near the ſame with that of common Wallnuts. It is us'd againſt pains in the Joints, as well in Beverage, as in Unction; as alſo againſt the biting of Serpents, about an Ounce at a time: it is apply'd alone, or mix'd with Bears-Greaſe, or among Pomatums to make the Hair grow.

Oleum Cryſomelinum, ſeu ex Nucleis Malorum Perſicorum & Armeniacorum.	Oyl of the Kernels of Peaches and Abricots.

The Oyls of the Kernels of Peaches and Apricots are drawn by the Preſs in the ſame manner as the Oyls already mention'd.

The Vertues of both theſe Oyls are very near the ſame. They are highly applauded againſt Pains, Obſtructions, and Noiſes in the Ears; as alſo againſt Deafneſs, being put into the Ear with a little Cotton dipp'd in them. They appeaſe the pains of the Hemorrhoids, and diſſipate ſwellings which are caus'd by them in thoſe parts: They are good to cure Wounds and Ulcers growing in thoſe places. They are highly commended againſt Worms in Children great and ſmall, being taken from two Drams to an Ounce. For which purpoſe the Kernels of Peaches and Almonds beaten, and given in a flowring Emulſion, are very much approv'd and experimented againſt the Jaundiſe in both Sexes, repeating the uſe of them.

Oleum

Oleum Balaninum. | Oyl of the Nut-Ben.

The Nut-Ben, call'd by the Greeks *Balanus Mirepſica*, by the Latins *Glans Unguentaria*, affords its Oyl by preſſing, in the ſame manner as the other Fruits before-mention'd. The Nut-Ben is in ſome ſort triangular, cover'd with a whitiſh, thin, ſmooth, and brittle rind: The ſubſtance of the Fruit is white, ſo is alſo the Oyl; and it is not only without ſcent, but very proper to receive any ſcent that you have a mind to give it; and it has this peculiar quality, that it does not grow Muſty like other preſs'd Oyls, but may be kept a long time in a good condition: For which reaſon Perfumers uſe it, to receive and preſerve the Odours of certain Flowers, which they would otherwiſe make no advantage of.

The Vertues of this Oyl are highly eſteem'd, and among other things to take out freckles and ſcars from the face, and other parts of the body, apply'd alone, or mix'd with Pomatums. It aſſwages pains in the Ears, and diſſipates the buzzing in them, being mix'd with Gooſe-greaſe, and put into them: It is proper to open the Obſtructions, and to ſoft'n and digeſt the hardneſſes of the Liver, Spleen, and other Bowels, being tak'n inwardly: It is us'd againſt cold diſeaſes of the Nerves and Joynts, as alſo againſt the Gout, apply'd upon the parts affected. The doſe is from half a dram to two drams, in White-wine, or ſome other Liquor.

By the ſame Method, Oyls may be extracted out of ſeveral Fruits of the ſame nature, and Seeds of like ſubſtance; as Piſtaches, Pine-apple kernels, the four greater cold Seeds, Kernels of Oranges and Citrons, Seſamum, Palma-Chriſti-ſeed, ſeeds of Piony, Muſtard, Hemp, Dwarf-Elder, Henbain, Lettice, Poppy, Carthamum, *&c.* which have every one their particular vertues, though ſeldom ready prepar'd in Shops, but upon occaſion.

Oleum ſeminis Aniſi per expreſſionem. | Preſs'd Oyl of Anniſeed.

You muſt be careful to have your Anniſeed new, very dry, well grown, and to make it very clean, and to beat it, and ſift it through a cloſe Hair-ſieve. Take a pound of this Powder, and having fill'd the hollow of a Plate, that may be ſet with the brims in the lower part of a Hair-ſieve, cover the Plate with the lower part of the Sieve; and keeping one hand upon the Sieve, which muſt then touch and cover the Plate fill'd with the Powder, and the other under the bottom of the Plate, of an inſtant turn the whole ſo, that the Powder may fall upon the Sieve, and be cover'd with the Plate; and the ſame time have a Copper-poſnet ready to that bigneſs, that the bottom of the Sieve may reſt within-ſide, but not go down to the bottom: then put in three pints of water; and having plac'd the Skillet upon a Furnace, as the water boils, let the Powder of Anniſeed receive the vapour for a quarter of an hour, or till the boiling vapours of the water have well penetrated the Powder, and till you can no longer endure the heat of the Plate that covers it: At what time having a ſtrong cloſe Cloth-bag ready, put the powder immediately into it, and having ty'd the Bag, preſs it between two hot Plates in a Preſs, with all the ſpeed and ſtrength that may be. By this means a pound of powder of Anniſeed will yield an ounce and a half, and ſometimes two ounces of Oyl, very ſweet, pleaſing, and having the true taſte of Anniſeed.

The preparation of this Oyl may be ſeen in a Treatiſe of Chymiſtry, which I compos'd and ſet forth in another Name, about twelve years ſince: But I am ſure it is not to be found in any Author that ever wrote before; ſo that I dare pretend to be the ſole Inventor.

Oyl of Anniſeed is very much extoll'd for expelling Wind contain'd in the Belly, and for appeaſing Colics that proceed from thence: It is proper to ſtrengthen the Stomach, to aſſiſt Digeſtion, and the diſtribution of the good Juice of the Nouriſhment to all parts of the body. This Oyl thus prepar'd, is leſs ſubtle, and leſs penetrating, then that which is drawn by Diſtillation; however, it has leſs Acrimony, and it may be alſo given in greater quantity, even to half a dram in Wine, or ſome other proper Liquor: It may be alſo apply'd, by way of Unction, upon the Stomach, Navel, and lower parts of the Belly, in Windy Colics. You may alſo put a drop or two in Childrens Broth that are troubled with griping pains.

Oleum

Oleum Nucis Moſchatæ. | Oyl of Nutmegs,

The Preparation of this Oyl is altogether agreeable to that of Anniſeed. So that if you be but careful to chuſe full grown Nutmegs, fat and weighty, to ſift the Powder through a cloſe Hair-ſieve, to follow punctually my Directions for the preſs'd Oyl of Aniſeed, you ſhall ſucceed better then by any other way, and have an Oyl of a very fair colour, and a very good ſmell; and more by half then from the ſame quantity of Anniſeeds. This Oyl looks liquid and clear as any other Oyl at the time of the Expreſſion, while it is warm; but it coagulates as ſoon as it is cold, and then appears of a yellow colour enclining to red, and of a ſolid conſiſtence.

I have formerly given a Preparation of Oyl of Nutmegs, according to my method, in a Treatiſe which I made upon Treacle, where I blam'd thoſe who following the Precepts of the Ancients, content themſelves with heating the Nutmegs beaten, and to preſs them hot, becauſe that heating cannot be done without a diſſipation of the moſt ſubtle, moſt volatile, and moſt odoriferous part of the Nutmegs, without a remarkable diminution of ſome part of the Oyl, and without obſcuring and ſpoiling the colour of it. Nor can I ſubſcribe to thoſe who having plac'd Oyl of Nutmegs among the Number of preſs'd Oyls, would have it prepar'd without fire; believing that they never conſider'd what they wrote, and becauſe they never prepar'd, nor never ſaw this Oyl prepar'd. Others have made uſe of my method, but to little purpoſe; but thoſe I let alone.

Oyl of Nutmegs is good againſt all humidities and coldneſs of the Stomach, and the Noble parts. For by its moderate heat it diſſipates and ſtrengthens the parts both at the ſame time: it ſtays vomiting, reſtoring the Stomach and Bowels to their Functions. It is preſcrib'd to correct the ſtinking of the breath that proceeds from foulneſs of the Stomach; to help digeſtion, create an appetite, and excite venereal vigour. It is taken inwardly in meat-broth from ſix Grains to a Scruple. It is alſo made uſe of to anoint the hollow part of the Stomach, having firſt melted it in a Spoon. To excite Coition, the Natural parts may be anointed therewith. It is alſo good againſt cold Fluxes of the Brain, anointing the Temples and Sutures of the head; and againſt Colicks, anointing the Navel. It is alſo good for the ground of Balſoms, as well in reſpect of its odour, as of its vertue to fortifie the Brain and Noble parts, or to ſuppreſs the vapours of the Matrix.

Oyl of Mace, endu'd almoſt with the ſame Vertues, may be alſo drawn by the preſs. You may alſo extract the Oyls of both by Diſtillation. But I refer theſe Preparations to the third Part of this Pharmacopœa.

Oleum Ovorum. | Oyl of Eggs.

Having choſen out new-laid Eggs, or at leaſt thoſe that are not ſtale, what number you pleaſe, boil them in Water till they are very hard, and having taken off the Whites and the Shells, crumble the Yolks into ſmall pieces, and fry them in a Frying-pan over a moderate Fire, ſtirring them from time to time with a Spatula, or a long Ladle; then leave off and hold them there till they begin to grow red, and to yield their Oyl; then after you have ſlightly ſprinkl'd them with Spirit of Wine, put them into a Linen-Bag very well warm'd, and having ty'd it, and put it into the Preſs very hot between two hot Plates, ſqueeze out the Oyl with all the ſpeed you can, and keep it for your uſe.

The Oyl of Eggs is highly eſteem'd to take away Scars, and other Deformities of the Skin; and particularly thoſe that remain after the Small-pox or burning. It aſſwages the pains of the Ears, and thoſe of the Hemorrhoids; cauſes the Hair to grow; cures Scabs and Tetters; diſſolves and carries off Tumours in the Mouth; and is very proper to heal rifts and chops in the breaſt, hands, feet, and fundament. It cleanſes Ulcers and appeaſes their pains, as alſo of all the nervous parts. It is alſo advantageouſly laid upon new Burns and Scaldings.

They that fear the bad impreſſion which the Oyl of Eggs may receive in the Pan during the frying of the Yolks, may do better to make uſe of a glaz'd Earthen-Veſſel, for torrefaction of the Eggs, eſpecially if the Oyl be intended for the Face: For which purpoſe, the better to take from the Oyl any impreſſion of an Empyreuma, to render it more cooling, and by whitening it, to make it fit to be mix'd in Pomatums, you may prepare this Oyl in the Month of *May*, and expoſe it to the Dew night

night and morning, ſtirring it from time to time, and keep it there till the ſtrong ſcent be gone, and it will look of a white colour. The Ladies of *Languedoc* are not ignorant of this preparation.

Oleum Laurinum.	*Oyl of Lawrel-berries.*
℞. *Baccarum Lauri recentium perfectè maturarum, quantum libuerit.*	℞. New Lawrel-berries perfectly ripe, what quantity you pleaſe.

The Berries being bruis'd, and put into a Kettle, let them boil in a ſufficient quantity of water for half an hour; ſtrain them, and preſs them out very ſtrongly. When the Oyl is cool, ſcum it off, ſwimming upon the water like fat: Then bruiſe the preſs'd Pulp again, and boil it in the remaining water, adding a ſmall quantity of freſh water to it, for about half an hour; ſtrain it, and preſs it, as before, and having gather'd the Oyl that ſwims at the top of the water, keep it a-part.

This Oyl is not eaſily prepar'd but in hot Countries, and where there is an abundance of Lawrels. The Ancients, and many of the Moderns, would have the Lawrel-berries to be beaten, before you put them into the water to boil; others would have you to boil them whole, provided they be new, and very ripe: I believe that either Method may be good; and that the Berries whole, having the greateſt part of their Oyl in their Superficies, and their Rind very tender, will eaſily afford their Oyl without any contuſion; and that by boiling them again, the ſame Berries will yet yield more Oyl. But I think it better to bruiſe them after you have drawn off the firſt Oyl, that you may the more eaſily obtain that which remains from the more compact part of the Berries: However, the firſt Oyl will be the greeneſt, the moſt pure, and the beſt; ſo that it will be convenient to keep the two Oyls a-part.

The ſame Method may be obſerv'd for the preparation of oyls of Lentisk, Myrtle, and other Oleaginous Berries.

Oyl of Lawrel-berries corrects the cold intemperature of all the parts of the body, as well that which is ſingle, as that which is accompani'd with Flegm and cold Flatuoſities: It ſoftens, attenuates, opens, and diſcuſſes; it remedies the cold affections of the Brain, Nerves, and Joynts, as alſo thoſe of the Stomach, Inteſtines, Liver, Spleen, Reins and Matrix: It is good againſt the Palſey, weakneſs of the Nerves and Muſcles, the ſhivering of Agues, anointing the Spine of the Back therewith: It aſſwages the pains of Sciatic Gouts, and thoſe of the Ears, and inveterate diſtempers of the Head. It cauſes ſharp humours to expire, driving them to the Superficies of the skin; for which reaſon it prevails againſt Scurfs and Tetters. It is alſo good to kill Worms and Fleas. It may be taken inwardly, to ten or twelve drops, in ſome proper liquor; but the chiefeſt uſe of it is for Exteriour Liniments. It may be alſo mix'd in Clyſters, from half an ounce to one, and ſometimes two ounces, in Colics that proceed from wind, or flegmatic and cold humours.

CHAP. II.

Of Oyls prepar'd by Infuſion, or Decoction.

Oleum Abſinthii.		*Oyl of Wormwood.*	
℞. *Abſinthii majoris recentis contuſi,*	℔ *j.*	℞. Of the freſh bigger Wormwood bruis'd,	℔ j.
Succi ejuſdem,	ʒ *iiij.*	Juice of the ſame,	ʒ iiij.
Roſarum Rubrarum ſiccarum,	ʒ *ij.*	Red-roſes dry'd,	ʒ ij.
Olei communis,	℔ *iiij.*	Common Oyl,	℔ iiij.

TAke a pound of large Wormwood, when it's mounted up into Flower, and bruiſe it in a Marble-Mortar, and put it into a glaz'd Earthen-pot, with the Juice of the ſame Wormwood, and Roſes, and Oyl preſcrib'd: Then after you have well ſtopt the

Pot, place it over a Bakers, or a Cooks Oven, or elſe in the hot beams of the Sun: Where after it has ſtood three days, ſet the Veſſel in *Balneo Mariæ*; and having let it boil for half an hour, ſtrain the whole, and preſs it forth by main ſtrength. Then return the Oyl preſs'd forth into the ſame Pot, with the ſame quantity of Wormwood, with its Juice, and the other Ingredients, as before; and having ſtopt the Pot, and kept it in Maceration, as before, let it boil in *Balneo Mariæ* again, and ſtrain, and preſs it, as at firſt, repeating all the ſame Operations a third time: Then after you have left the Oyl to ſettle for four and twenty hours, ſeparate it from the Fæces and moiſture, and keep it for your uſe.

Oyl of Wormwood is highly commended againſt all cold diſeaſes of the Stomach, for it heats and ſtrengthens very much, aſſiſting it to perform its duty, and reſtoring the Appetite; it diſſipates Wind, and appeaſes the Colicks caus'd thereby; it kills Worms, and cures the infirmities of the Ears, by ſtopping them with Cotton dipp'd in ſome few drops thereof. It is apply'd by way of Unction upon the Stomach and Belly: It is alſo put into Clyſters, from one to two or three ounces.

They that live in hot Countries, where the Beams of the Sun are very violent in *May* and *June*, when Wormwood is in its chiefeſt ſtrength, may do well to make uſe of the Sun for Maceration: But in parts remote from the Sun, which enjoy not that heat, we are conſtrain'd to make uſe of the heat of Fire, as well for this as for many other Macerations, which are neceſſary to be done.

I know there are ſome perſons alſo ſo exact in the preparation of this, and other Oyls, as to put the Ingredients into a Glaſs-Cucurbit, cover'd with its Alembic, and to ſet the Cucurbit in *Balneo Mariæ*, to draw away all the moiſture that will aſcend, to mix it again with the preſs'd Oyl, and ſeparate it afterwards. But becauſe Oyl of Wormwood, and ſuch-like, are only us'd in Exteriour Oyntments, I cannot find but that the diſſipation of the Volatile parts, very difficult to be preſerv'd, is a thing to be more lookt after; beſides, that by this method you cannot fail to communicate to the Oyl whatever the Wormwood and Roſes have of good qualities, and moſt proper for the intentions for which this Oyl of Wormwood was invented.

Oyls of Mint, Sage, Dill, Rue, and the like, are to be prepar'd after the ſame manner.

Oleum Roſatum Simplex.		*Simple Oyl of Roſes.*	
℞. *Roſarum Rubrarum recentium contuſarum,*	℔ *ij.*	℞. Freſh Red-roſes bruis'd,	℔ ij.
Succi Earundem,	℔ ß.	Juice of the ſame,	℔ ß.
Olei communis,	℔ *v.*	Common Oyl,	℔ v.

Put them all together in a glaz'd Earthen-pot cover'd; macerate them for forty days in the Sun, if poſſible; then boil them in *Balneo Mariæ*, preſs them, and keep the Oyl for uſe.

This Oyl requires no great trouble, as being made with the only Maceration of the Roſes. The vertues and uſes are the ſame with thoſe of the following Oyl.

Oleum Roſatum Compoſitum.		*Compound Oyl of Roſes.*	
℞. *Roſarum rub. recentium contuſ.*	℔ *j.*	℞. Freſh Red-roſes bruis'd,	℔ j.
Succi Roſarum Rubrarum,	℥ *iiij.*	Juice of Red-roſes,	℥ iiij.
Olei communis,	℔ *iiij.*	Common Oyl,	℔ iiij.

Put them in a glaz'd Earthen-pot with a narrow Orifice, and after you have well ſtopt it, ſet it in Maceration in the beams of the Sun for four days; then having boil'd the Ingredients for an hour in *Balneo Mariæ*, ſtrain and preſs them. Return the Liquor preſs'd forth into the ſame Veſſel again, repeating the ſame operations thrice in all; and when you have ſo done, purifie the oyl, and keep it for uſe.

For want of a hot Sun, ſet the Pot upon a Bakers or Cooks Oven. Nor is the diſſipation of the Volatile parts of the Roſes to be fear'd, during the macerations and boilings preſcrib'd; by reaſon thoſe parts are ſo imbody'd with the watry and terreſtrial part, that a ſeverer heat then that of a boiling Bath is not able to ſeparate them. And

we

we find demonſtratively that Red-Roſes do not impart their ſweet ſcent till after they are dry'd; for which reaſon we expoſe them to the heat of the Sun, which acting only upon the ſuperfluous moiſture of the Roſes, does no damage to the ſcent, nor to any of the good qualities which we deſire. And if there remain any moiſture after boyling the Oyl, it will be eaſie to ſeparate it becauſe it falls to the bottom.

This Oyl is good to dulcifie, and diſſipate fluxions that fall upon the External-parts. For it extinguiſhes inflammations, hinders the deſcent of the humours, and appeaſes pains. It tempers the heat of the Stomach, and the heat of the Reins. It aſſwages the pains of the Head, as alſo deliriums, and provokes ſleep, ducifying the ſharp humours that interrupt it by their Acrimony: It muſt be warm'd before you anoint the parts with it. It may be alſo inwardly given againſt the Worms and in Dyſenteries, from half an ounce to an ounce. It is good to anoint the part upon Fractures and Diſlocations of Bones. It is mix'd with equal parts of Vinegar of Roſes to anoint the Head after ſhaving; to abate the Vapours that aſcend in burning-Fevers, which cauſe want of ſleep and Deliriums. This Oyl is alſo mix'd in pain-eaſing and diſſolving Liniments and Cataplaſmes, and to ſoften Emplaiſters to give them the conſiſtence of a Sear-cloth.

The preparation of this Oyl may ſerve as a rule for the preparation of thoſe of *Nymphæa* or Water-Lillies, Lillies, Violets, Chamomile, Melilot, Elder, Myrtle and the like.

Oleum Jaſmini. *Oyl of Jeſſomines.*

Take little Floks of white-Cotten carded, or elſe little pieces of Cloth whiten'd with Alum, which have no bad ſmell; and dip them ſlightly in oyl of Ben drawn without Fire, and having ſpread them in a Baſon of white Earth, Tin, or Silver, ſtrow them over with Jaſmin-flowers newly gather'd about a fingers-breadth high: then covering the Baſon with a Baſon like the former, wrap them up in Woollen or coarſe linen-cloth. At the end of four hours take away the firſt Flowers, and put in freſh; renewing the ſame operation every three or four hours ten or twelve times. Then put the pieces of cloth or floks of Cotton in a Preſs, and preſs out the oyl without any heat at all. This oyl will be impregnated with the ſcent of the Flowers and keep a long time, ſo the Viol be well-ſtopp'd.

The odours and vertues of Flowers of Jeſſomin are ſo volatile, that they will endure no heat; ſo that it is to no more purpoſe to infuſe or boil them, then it is to pretend to impart their ſcent to any ſubſtance by the means of Fire or Diſtillation. Which engag'd Artiſts to ſeek out other ways and means wherein they have ſo well ſucceeded, that they are now able to impart their ſcent to Oyls, Pomatums, Gloves, and other Subſtances; obſerving the preceding method.

You may alſo inſtead of pieces of cloth, or floks of cotton dipp'd in Oyl of Ben, make uſe of the Fruit of Ben it ſelf, groſly bruis'd, ſpreading it in a Baſon, and covering it with Jaſmine-flowers, after that with another Baſon, proceeding in every thing as before, and the Oyl thus drawn without fire from the Ben thus perfum'd, will be as odoriferous, and keep as long.

You may alſo make uſe of Sweet-Almonds bruis'd or their Oyl: But ſtill the Fruit of Ben, or its Oyl is better; becauſe that the Oyl of Almonds being ſubject to grow rank, will ſpoil the ſcent of the Jaſmins.

The Ancients and ſome of the Moderns direct the preparation of Oyl of Jeſſomines to be made by divers Infuſions of the Flowers in Oyl of Sweet-Almonds, or Oyl of Olives, and to proceed after the ſame manner as for Oyl of Roſes: But the little vertue and leſs uſe of the Oyl thus prepar'd will not permit any Artiſt to ſpend his time upon this preparation.

They alſo who have endeavour'd to extract Roſes by diſtillation, proceeding as in the diſtillation of Roſes, certainly will no longer adhere to that which is ſo remote from daily experience.

Oyls of Orange, Citron-flowers, Violets, Clove-Gillow-flowers, Roſes and many others, may be extracted after the ſame manner, as that of Jeſſomines. Not but that theſe and other Flowers of a more compact ſubſtance will alſo yield their oyls by diſtillation.

Oyl of Jeſſomines is principally eſteem'd for its pleaſing and delightful ſmell. And it is rather made uſe of for the pleaſures of thoſe that are in health, then for the cure of

the Sick; though the recreating ſcent may be of no ſmall efficacy to fortifie the Brain and noble-parts.

Oleum Cydoneorum.

℞. *Cydoneorum nondum maturorum contuſorum, & Olei communis, an.* ℔ *iij.*

Oyl of Quinces.

℞. Quinces not fully ripe, bruis'd, and common-oyl, of each, ℔ iij.

Take the Quinces not fully ripe, and having bruis'd them in a Marble-Mortar, put them into an Earthen-pot glaz'd within, with a narrow mouth, together with the oyl preſcrib'd, and having cover'd the Pot, keep it upon hot Embers for four and twenty hours, and in a boyling Balneo-Mariæ for one good hour. Then ſtrain and preſs forth the matters with a forcible ſtrength. Then putting in the ſame quantity of freſh Quinces into the preſs'd oyl, and having repeated the ſame operations once again, ſeparate the oyl from the feces and moiſture, and keep it for uſe.

Oyl of Quinces is of a very temperate quality. It fortifies and cloſes; for which reaſon it is an excellent remedie againſt weakneſſes of the Stomach, Liver and Inteſtines. It alſo ſtrengthens the lower region of the Belly, as alſo the Nerves and Muſcles relax'd. It ſtays Vomiting; and is prevalent in caſe of Diſenteries, Diarrheas, Lyenteries: It ſtops immoderate Sweats being apply'd upon the Breſt, and all along the ſpine of the Back. It is principally made uſe of for outward Unction, though it may be tak'n inwardly if prepar'd with any oyl well choſen. It may be alſo mix'd from one ounce to two in aſtringent and deterſive Clyſters.

Oleum de Capparibus.

℞. *Corticis Radicum Capparum & Fructuum eorundem, an.* ℥ *iiij.*
Corticis Radicum Tamariſci, & ſummitatum ejus Floridarum, an. ℥ *ij.*
Foliorum Rutæ recentium,
Cicutæ,
Ceterach,
Seminis Agni Caſti, &
Oculorum Geniſtæ, an. ℥ *j.*
Aceti fortis, &
Vini Albi, an. ℔ ß.
Radicis Cyperi, &
Gentianæ, an. ℥ ß.
Olei Communis, ℔ *iij.*

Oyl of Capers.

℞. The Rind of the Roots of Capers, and Fruit of the ſame, *an.* ℥ iiij.
Rind of the Root of Tamarisk, and Flowr'd-tops of the ſame, *an.* ℥ ij.
Freſh Leaves of Rue,
Hemlock,
Ceterach,
Seeds of Agnus-Caſtus, and Broom-Buttons, *an.* ℥ j.
Strong-Vinegar, and White-wine, ℔ ß.
Root of Cyperus, and Gentian, *an.* ℥ ß.
Common-oyl, ℔ iij.

Neither new nor old Diſpenſatories afford a deſcription of oyl of Capers rightly preſcrib'd; and therefore the Kings firſt Phyſitian thought fit that I ſhould produce a new one, which has certainly all the vertues that Authors have attributed to this oyl.

Bruiſe the Roots of Capers, Tamarisk, Cyperus, and Gentian groſly, cut the Leaves and Stalks of the Plants; ſquaſh the Broom-buttons and Capers in a Marble-Mortar, and in a little Braſs-Mortar, beat the Seed of Agnus-Caſtus. And having put the whole into a glaz'd Earthen-pot with a ſtraight-neck, among the Oyl, Vinegar, and White-Wine preſcrib'd, cover the Pot and keep it upon the hot Cinders, for four and twenty hours; after which ſet it in a boyling-Bath till the Wine and Vinegar be almoſt conſum'd. Then ſtrain and preſs the whole with a violent ſtrength, and when the oyl is well ſeparated from the feces, put it up for uſe.

Oyl of Capers is very much commended againſt all pains of the Head, Spleen, and to diſſolve ſchirrous humours that grow there. For it powerfully cuts, attenuates and diſcuſſes tenacious and rebellious humours. It opens the Pores of the Skin, and the parts which are underneath it; and diſſipates the ventoſities which are therein contained. The Region of the Spleen may be externally anointed with it.

The various Ingredients of this Compoſition might ſeem to require a different method for their Infuſion and Decoction. But the cutting, opening and diſcuſſive qualities here deſir'd cannot be grounded upon the volatil-parts which eaſily diſſipate, but rather upon the fix'd, which lying long upon the Body, have time to produce their effects. The

infuſion

infusion for twenty four hours, preceding the coction, sufficiently opens the Ingredients of more compact substances, whereby they are in a better capacity to impart their vertue to the oyl. Besides that the infusion being made over a moderate fire in a close vessel, and the Acid-parts of the Vinegar binding those few volatile-parts which they meet with in some few Medicaments, there is no fear of dissipation; so that there is no need of different infusions and decoctions, especially the compositions being only intended externally.

Oleum Mastichinum.		*Oyl of Mastich.*	
℞. *Mastichis electæ,*	℥ vj.	℞. Select Mastich,	℥ vj.
Olei Rosati,	℔ *ij.*	Oyl of Roses,	℔ ij.
Vini Generosi,	℥ *ij.*	Strong-wine,	℥ ij.

Having made choice of new clear Mastich, and grosly pulveriz'd it, put it into a strait-mouth'd earthen glaz'd-pot, and after you have pour'd upon it the oyl and the Wine prescrib'd and cover'd the pot, put it into a boyling Maries-Bath; and keep it there till the Mastich be altogether dissolv'd in the oyl. Then take the Vessel from the Fire, strain the dissolution through a small linen-bag, let it settle for some time, and having separated that little watry-moisture that may remain behind, keep the oyl for your use.

The oyl of Mastich is fit to fortifie the Brain, the Nerves and Joynts. It is good against weaknesses of the Stomach, and to stay Vomitings: it strengthens the Liver and appeases the pains of it. It is highly applauded against Dysenteries and Lienteries, whether you anoint the Stomach and Belly therewith, or mix it in Clysters from one ounce to two.

The oyl of Mastich has no need either of long or violent coction, it being a Gum that easily dissolves in oyl by reason of the similitude of their substance. That little Wine which is prescrib'd serves only to prevent the bad impression which the Mastich and oyl may receive from the Fire during coction. It was not thought convenient to put four ounces of Wine to a pint of oyl, and three ounces of Mastich, as some direct, nor to boyl it to the consumption of the Wine: which is not to be done without a remarkable disposition of the volatile-parts of the Mastich, and a great alteration of the oyl: nor can there be any thing expected from the Wine whose volatile-part is soon consum'd, the watry and terrestrial parts which remain being good for nothing.

Oleum Nardinum.		*Oyl of Nard.*	
℞. *Spicæ Nardi minutim incisæ & contusæ,*	℥ *iij.*	℞. Spikenard cut small and bruis'd,	℥ iij.
Vini Generosi,	℥ *iiij.*	Strong-wine,	℥ iiij.

Take six ounces of Spikenard, and having bruis'd them in a great Brass-Mortar, put them into a strait-mouth'd Earthen glaz'd-Pot, and having well moisten'd them with four ounces of good Strong-wine, cover the Pot and let them infuse in a temperate place:

Deinde superfundantur		Then add	
Olei Communis,	℔ j ß.	Common-Oyl,	℔ j ß.

Stop up the Pot, and keep it in a boyling Maries-Bath till the Wine be almost consum'd. After that strain and press the whole strongly, and having separated the oyl from the Feces, put it up for use.

The driness and hardness of the Spikenard is the reason of its being order'd to lye in maceration two hours, to soak, supple and open it, for the more easie penetration of the Oyl. But why the Ancients should prescribe but six ounces of Oyl to three of Spikenard is to me a wonder: For it is impossible that six ounces of Oyl can imbibe and retain all the vertue of three ounces of Spikenard. It being certain that when a Menstruum is sufficiently satiated with the substance which it is put to dissolve, it can receive

receive no more, eſpecially when the ſubſtances are drye and able to imbibe a far greater quantity of the Menſtruum; ſo that they had no reaſon to put nine Ounces of Spikenard to a pound and a half of Oyl, ſince three ounces are enough to charge that quantity of Oyl. Now though Spikenard be none of the meaneſt among Aromatics, and that there may be ſome fear of a diſſipation of its volatile parts during coction; yet when we conſider, that though it be kept twenty years it ſtill preſerves its ſtrong ſcent and taſte, and that it is of a ſubſtance more compact then any other Aromatic, we cannot believe that by this Infuſion and Coction in a boiling Bath it can loſe any conſiderable part of its ſubſtance, but rather that it would be a difficult thing to impart the vertue of the Spikenard by a leſſer heat.

This oyl is proper to heat, attenuate, and digeſt, being a moderate cloſer; ſo that it is very uſeful againſt cold and windy affections of the Brain, Stomach, Liver, Spleen, Kidneys, Bladder, and Matrix: It unſtops and purges the Brain, being dipt with Cotton, and put up the Noſtrils, or into the Ears, the pains whereof it aſſwages. It is good againſt the Palſey, and ſhakings of the Nerves; againſt Tumours, Suffocations, and Stranglings of the Matrix, being us'd as a Peſſary. It is alſo made uſe of by way of Injection, to aſſwage the pains of the Bladder.

Oleum Hyperici.	*Oyl of S. John's Wort.*
℞. *Summitatum floridarum Hyperici ad maturitatem vergentium,* ℔ *ij.*	℞. The Flower-tops of S. *John*'s Wort inclining to ripeneſs, ℔ ij.

Bruiſe them in a Marble-Mortar, and put them into a ſtreight-mouth'd glaz'd Earthen-pot:

Tunc ſuperfundantur,	*Then add,*
Olei communis, ℔ *iiij.*	Common Oyl, ℔ iiij.
Vini generoſi, ℔ ß.	Strong Wine, ℔ ß.

Cover the Pot, and let it ſtand upon the hot Embers for four and twenty hours; then remove it into a Boiling-bath for two hours, ſtirring the Ingredients from time to time with a wooden Spatula; then ſtrain and ſtrongly preſs out the whole. In the mean time, having put the ſame quantity of the tops of S. *John*'s Wort into the ſame Pot, and pour'd the preſs'd oyl upon them, repeat the ſame Maceration, Coction, Straining and Preſſing; and after you have well ſtrain'd and preſs'd forth the whole, renew all the ſame operations a third time to new tops of S. *John*'s Wort; then having ſeparated the oyl from the fæces and moiſture, incorporate it over a gentle fire with two pound of Venice-Turpentine, and when it is off the fire, mix with it three ounces of tincture of Saffron, and keep the oyl for uſe.

You ſhall find the preparation of Tincture of Saffron in the Third Part of this *Pharmacopœa.*

Oyl of S. *John*'s Wort may be prepar'd without adding either Turpentine or Saffron, and it is call'd Hypericon Simple: But this is much better in all reſpects.

I might have here ſpoken againſt ſome deſcriptions of oyl of S. *John*'s Wort, which are to be met with in ſundry Authors; but I thought it ſufficient to give a true one, not doubting but it will be preferr'd before any of thoſe, the defects whereof the meaneſt Apothecary may eaſily underſtand.

Oyl of S. *John*'s Wort thus prepar'd, may be accompted an Effectual Balſom; it heats, attenuates, diſſipates and dries: whence it comes to paſs, that it is very proper againſt all pains that proceed from cold, particularly againſt all ſorts of infirmities in the joynts, the Sciatica, and all ſorts of Gouts, as alſo to eaſe the pain of the Teeth. It is an excellent thing to heal all ſorts of wounds, together with thoſe of the Nerves, for it glutinates and cicatrizes; it likewiſe cures Burns: It is good againſt Worms, and the Convulſion: It is us'd externally to anoint the parts where there is occaſion: It is alſo mix'd in Vulnerary Injections, in Digeſtives, in Cataplaſmes, and many other External Remedies.

Oleum

Oleum Irinum.	*Oyl of Orrice.*
℞. *Radicum Ireos recentium minutim inciſarum, &*	℞. New Roots of Orrice cut very ſmall, and
Florum ejuſdem, an. ℥ j ß.	Flowers of the ſame, *an.* ℥ j. ß.
Olei communis, ℔ v.	Common Oyl, ℔ v.

Scrape and cut very ſmall the Orrice-roots, by reaſon of the ſolidity of their ſubſtance; then put them together with the Flowers lightly cut, into a glaz'd Earthen-pot; and having pour'd upon them the oyl preſcrib'd, and cover'd the Pot, let it ſtand over hot Embers for twenty four hours, and afterwards in a boiling Bath for two hours; then ſtrain and forcibly preſs out the whole: Reiterate twice the maceration and decoction of new Roots and Flowers, doing in every thing as at firſt; then ſeparate the oyl from the fæces, and put it up. This oyl thus prepar'd, will be very much impregnated with the good ſcent and vertues of the Orrice.

There are ſome that in making the Infuſions and Coctions of this Oyl mingle therewith a Decoction of the Roots and Flowers of Orrice. But this Decoction would be ſo far from communicating any vertue, that it would be but a charge, in regard the Roots and Flowers have moiſture enough, ſo that if you ſtill add more, by conſuming it among the Oyl, the ſcent and vertue of the whole would be notably diminiſh'd.

Oyl of Orrice powerfully heats, mollifies, attenuates, digeſts, and diſſolves. It penetrates, concocts, and ripens matters that are gather'd together, diſſipates pains in the Ears, corrects the ſtinking of the Noſtrils, ripens Flegm, comforts the Aſthmatics, and aſſwages the vehemency of coughing, being applyed to the breaſt. It diſcuſſes the ſwellings of the Kings-Evil, and hardneſſes of the Spleen and Liver; as alſo thoſe of the Joints, the pains whereof it eaſes. It aſſwages the griping pains of the Inteſtines, eſpecially thoſe of the *Ileon*. It is good againſt the Dropſie, and eſteemed a ſpecific againſt the Poyſon of Hemlock, and Champignons, taken inwardly about two or three ounces. The ſame quantity may be alſo uſed in Clyſters againſt Diſeaſes of the Inteſtins.

Oleum Lumbricorum.	*Oyl of Earth-worms.*
℞. *Lumbricorum terreſtrium craſſiorum lotorum, & Olei communis, an.* ℔ iij.	℞. Large Earth-worms, and Common Oyl, *an.* ℔ iij.
Vini albi, ℔ ß.	White-wine, ℔ ß.

Chuſe out large Earth-worms, and put them in an Earthen-pot cover'd for three days, to the end they may empty themſelves of the Earth which they had ſwallow'd; waſh them well, and having dry'd them in a clean Linen-cloth, put them into an Earthen glaz'd-pot, and having pour'd the Oyl and Wine preſcrib'd upon them, and cover'd the Pot, let it ſtand upon the hot Embers for 24 hours; then for an hour in the boiling Bath, or till the greateſt part of the moiſture be conſum'd. After which having ſtrain'd, and forcibly preſs'd the whole, ſeparate the Oyl from the fæces, and put it up.

Some add more Wine, but to little purpoſe; in regard that the moiſture of the Worms is ſuch, that the half-pint of Wine is more then enough already for their maceration and coction, and to impart their vertue withall to the Oyl.

The Oyl of Earth-worms is chiefly us'd againſt pains of the Joints. It is very proper for the cure of Wounds, ſhrinking of the Nerves, and other Infirmities of the Nerves and Muſcles. The uſe of it is only external.

Oleum Caſtorei.	*Oyl of Caſtor.*
℞. *Pinguedinis in Ciſtide vero Caſtoreo adhærenti contentæ,*	℞. Of the Fat in the Veſicle adhering to the true Caſtoreum,
Vini generoſi, an ℥ iij.	Strong Wine, *an,* ℥ iij.
Olei communis, ℔ j.	Common Oyl, ℔ j.

Macerate

Macerate them in a glaz'd Earthen-Veſſel cloſe ſhut for 24 hours, then ſet them in a Bath between luke-warm and boiling hot till the Wine be conſum'd: Then having ſtrain'd and ſeparated the Oyl from the fæces, keep it for uſe.

The Unctuous Liquor contain'd apart in a Veſicle within the Bags of the Caſtoreum, ſeems to have been chiefly deſign'd for the preparation of this Oyl, by reaſon of its fat ſubſtance which has ſome reſemblance to Oyl, which the fleſhy ſubſtance of Caſtoreum hath not.

The ſcent of this unctuous part is penetrating and noyſom, and very like that of the fleſhy part, ſo that the vertues of it are not much inferiour, eſpecially for external application; and certainly the three ounces here preſcrib'd muſt be as much or more effectual, then one ounce of the fleſhy part, which ſome Authors have thought enough for the ſame quantity of oyl.

We meet with, in ſome Authors, deſcriptions of an Oyl of *Caſtor*, compos'd of ſeveral Aromatics, and ſome watry Gums, the vertue of which they pretend to extract by adding a great quantity of Wine; not conſidering that watry Gums, though diſſolveable in Wine, cannot incorporate with the oyl, but only give it ſome impreſſion of their vertue, to which the quantity of Wine ſo exceſſive is but injurious, in regard the Wine muſt be conſum'd, and in conſuming, it certainly carries with it the beſt part of the Gums, as alſo of the Aromatics, which is ſtill the more Volatile. For that reaſon they had done much better, not to uſe above an ounce of Wine, and only enough to prevent the Empyreuma of the ſubſtances; and to endeavour by a long Maceration, and a ſlow boiling, to extract the vertues of thoſe Aromatics; and ſome few drops of the diſtill'd oyls of the principal Aromatics which they preſcribe, would work a better effect among the oyl of *Caſtor*, then all the Macerations and Decoctions of oyl of *Caſtor* which they could preſcribe.

Oyl of *Caſtor* is highly commended in cold diſeaſes of the Brain, againſt the tremblings and contractions of the Nerves, Convulſions, and the Palſie, being apply'd by way of Unction upon the Nerves, and principally all along the Back-bone. It is a ſingular Remedy alſo againſt the tremblings and quiverings of Agues.

Oleum Scorpionum Simplex.		*Simple Oyl of Scorpions.*	
℞. *Olei Amygdalarum amararum,*	℔ *iij.*	℞. Oyl of bitter Almonds,	℔ iij.
Scorpiones vivos,	*No. Lx.*	Live-Scorpions,	No. Lx.

Put the Oyl of Almonds into a glaz'd Earthen-pot with a cloſe mouth, and then ſet the Pot in a boiling Mary's Bath; and when the oyl is very hot, plunge into it ſixty the faireſt and moſt vigorous live-Scorpions that can be got, and adding thereto eight ounces of good Wine, and having ſtopt the pot, let it boil till the moiſture be almoſt conſum'd: then ſtrain and preſs the Scorpions very well; and after you have ſeparated the Oyl from the Feces, put it up for uſe.

It is a hard matter rightly to prepare Oyl of Scorpions but near thoſe places where the Scorpions breed, becauſe they cannot be carry'd far, but the moſt of them will die by the way; and therefore it is better to intruſt ſome faithful friend to make it upon the place, then to imploy decay'd and languiſhing Scorpions, or ſuch as dy'd by the way, which beſides the diminution of their vertue, may chance to be putrifi'd. In the mean time, I do not find that the Precepts of the Ancients for the preparation of this Oyl had much of judgment in them, who direct a Maceration of the Scorpions in the Oyl during the Dog-days, and then to ſtrain and preſs the Oyl: For it is impoſſible that the Sun ſhould heat the Oyl in ſuch ſort, as to inable it to penetrate the Scorpions, which are cover'd with a ſcaly hard skin, eſpecially in our Climate; where though the Sun were able to heat the oyl to ſuch a degree as to make it penetrate the Scorpions, it could not be able to conſume the viſcous moiſture which is in their bodies, which coming to putrifie, alters the good qualities of the Animals, and cauſes the Oyl to ſtink inſupportably; which being conſider'd, this Preparation muſt certainly be adjudg'd the beſt in all reſpects.

Oyl of Scorpions is eſteem'd againſt detention of Urine: ſome Authors believe it able to diſſolve the Stone in the Kidneys, as alſo in the Bladder, being apply'd outwardly, or injected into the Bladder. It is made uſe of with ſucceſs againſt the ſtinging of Scorpions; it is alſo very good againſt the Plague and Poyſon, not only by outward anointing, but taken inwardly from half a dram to two drams.

Oleum

Oleum Scorpionum compoſitum.		*Compound Oyl of Scorpions.*	
℞. *Olei veteris,*	℔ *vj.*	℞. Old Oyl,	℔ vj.
Foliorum Hyperici recentium,	*M. iiij.*	Freſh Leaves of Saint-*John*'s wort,	M.iiij.
Summitatum Chamædryos,		Tops of Germander,	
Calaminthi,		Calaminth,	
Cardui Benedicti, an.	*M. j.*	Carduus Benedictus, *an.*	M. j.

Gather the Saint-John's-wort, Germander, Calamint, and Carduus-Benedictus preſcrib'd, and having bruis'd them in a Marble-Mortar, put them into a ſtrait-mouth'd glaz'd Earthen-pot, and pour upon them ſix Pints of Oyl of two or three years old, well depurated. Stop the Pot, and expoſe it to the Sun for twelve days; and after that ſet it in *Balneo Mariæ* lukewarm for three days; then let it boil for an hour, and having ſtrain'd and preſs'd out the whole,

Tunc		*Then*	
℞. *Florum Hyperici Recentium rejectis ſtipitibus contuſorum,*	*M. vj.*	℞. Flowers of Saint-John's-wort, freſh and cleans'd from their Stalks.	M. vj.

Bruiſe them in a Marble-Mortar, put them in the Pot, and pour upon them the preſs'd oyl of the firſt infuſion; and having well-ſtopp'd the Pot, expoſe it to the Sun for twelve days; at the end whereof, having kept the Pot three days in the luke-warm Bath, and afterwards in the boiling Bath for the ſpace of an hour, ſtrain and forcibly expreſs the whole as at firſt.

Expreſſioni eodem vaſe exceptæ adde		*To the Expreſſion in the ſame Veſſel add*	
Granorum Hyperici floribus ſpoliatorum, ſemine turgentium, contuſorum,	*M. ix.*	Of the round heads of Saint *John*'s-wort, without the Flowers, full of ſeed, and bruis'd,	M. ix.

Repeat Inſolation, Maceration, Coction, Straining, and Preſſing as before:

Hiſq; peractis,		*which done,*	
℞. *Foliorum Scordii recentis,*	*M. j ß.*	℞. Leaves of Water-Germander,	M. j ß.
Calaminthæ,		Calamint,	
Cardui Benedicti,		Bleſſed Thiſtle,	
Verbeniæ,		Vervain,	
Dictamni Cretici, &		Tops of Cretan Dittany, and	
Comarum Centaurii minoris, an.	*M. ß.*	Leſſer Centaury, *an.*	M. ß.
Radicum Zedoariæ,		Roots of Zedoary,	
Dictamni albi,		White Dittany,	
Gentianæ,		Gentian,	
Tormentillæ,		Tormentil,	
Ariſtolochiæ Rotundæ, an.	*℥ iij.*	Round Birthwort, *an.*	℥ iij.

Bruiſe them all, put them into the Pot with the oyl preſs'd forth, ſtop the Pot and keep it three days in the luke-warm Bath; afterwards let it boil an hour, and ſtrain and preſs forth the Ingredients.

Tunc,		Then,	
R. *Scorpiones trecentos diebus Caniculatibus captos.*		R. Three hundred Scorpions taken in the Dog-days.	

Put them in the Pot that ſerv'd for the other Infuſions, and ſet it upon very hot Embers, often ſtirring the Scorpions, and ſtirring them one upon another, till the Scorpions begin to ſweat and be angry, then pour upon them the laſt Expreſſion, and having ſtopp'd the Pot, keep it 24 Hours in the luke-warm Bath; and afterwards having let it boil about an hour, ſtrain and ſtrongly preſs the Scorpions; then throw them away, and keep the Oyl.

Tandem,		*Laſtly,*	
R. *Cinnamomi Electi,*	℥ *ix.*	R. Select Cinamon,	℥ ix.
Styracis Calamitæ,		Calamite-Storax,	
Benzoyni, an.	℥ *vj.*	Benjamin, *an.*	℥ vj.
Baccarum Juniperi,		Juniper-Berries,	
Santali Citrini,		Yellow Saunders,	
Theriacæ,		Treacle,	
Mithridatii, an.	℥ ß.	Mithridate, *an.*	℥ ß.
Rhabarbari,		Rhubarb,	
Myrrhæ Electæ,		Select Myrrh,	
Aloes Succotrinæ, an.	℥ *iij.*	Aloes Succotrine, *an.*	℥ iij.
Nardi Indicæ,		Indian Nard,	
Nigellæ Romanæ, an.	℥ *ij.*	Roman Fennel-flower, *an.*	℥ ij.
Junci Odorati,		Camels-hay,	
Cyperi,		Cyperus,	
Croci, an.	℥ *j* ß.	Saffron, *an.*	℥ j ß.

Beat all theſe together, except the Treacle and Mithridate, and put them into the Pot with the Treacle and Mithridate, and the Expreſſion of the oyl; then ſtop the Pot, and keep it four and twenty hours in *Balneo Mariæ* luke-warm; after that, cauſe the Bath to boil for about half an hour, and then ſtrain and preſs the whole violently through a ſtrong cloſe-woven linen-cloth; and having ſeparated the oyl from the feces, keep it in a Bottle cloſe-ſtopp'd.

The Quantities of the Ingredients that compound this oyl, are very like to thoſe in the Receipt which *Matthiolus* has left us. The greateſt alteration is in the oyl, which is here with great reaſon augmented to half as much again. For beſides that it is impoſſible that three pints of oyl ſhould imbibe and retain the Vertues of ſo many Ingredients, the greateſt part of the oyl would be waſted in ſo many re-iterated ſtrainings and expreſſions: and it is well if after all is done, you find five pints of the ſix here preſcrib'd. You ſhall find alſo the times and number of the Infuſions leſſen'd; and it had not been amiſs to have taken away more, conſidering the various parts of the Hypericon, which are to be us'd; which being not to be gather'd, but at ſeveral times, force us to prolong the Infuſions, and to ſtay till the Dog-days, which is the time appointed to take the Scorpions. As to the Treacle and Mithridate, which *Matthiolus* would have left in the oyl after all the other Operations are ended, I ſay, that beſides that they are able to communicate their vertue to the oyl without leaving it in the ſubſtance, certain it is that they would lye like Mud at the bottom of the oyl, without any addition to the vertue of the oyl; whereas according to this Method the oyl will be pure and ſightly, and altogether as effectual. It is alſo very proper to reſerve all the Aromatics till the laſt Infuſion, and give them leſs heat, to avoid the diſſipation of their principal volatile parts. Nor is there any need of Wine, in regard the Hypericon and other Plants afford all that moiſture which is requiſite, for all the Inſolations, Macerations, and Coctions preſcrib'd; beſides that this moiſture is alſo augmented by that of the Scorpions, which afford enough not only for their boiling, but alſo to hinder the diſſipation of the Sulphury parts of the Aromatics.

This oyl being apply'd to the Arteries of the Temples, the Wriſts, the Feet, the Noſtrils, the Region of the Heart, and the Pit of the Stomach, by often anointing, every three hours, and taken inwardly twice a day, from half a ſcruple to half a dram, is highly commended againſt all ſorts of Poyſons and Venoms, eſpecially thoſe that are not corroſive; againſt the bitings of Vipers and Aſps, and all ſorts of venemous Animals; to preſerve from and cure the Peſtilence. It is alſo ſucceſsfully made uſe of againſt the Small-Pox, the Meazles, and in all Epidemic Diſeaſes: As alſo againſt the Epilepſie, the Palſie, and moſt part of the Infirmities of the Brain. But particularly againſt Worms, and againſt the Poyſon of Wolfs-bane, and other Aconites.

Oleum

Oleum Vulpinum.

℞. *Vulpem adultam, pelle exutam, exenteratam, & in partes dissectam,*
Salis communis, ʒ iiij.
Aquæ Fontanæ, q. s. ad Vulpis coctionem.

Oyl of Foxes.

℞. A young-grown fat Fox, flea'd, dismbowell'd, and cut into pieces,
Common Salt, ʒ iiij.
Fountain-water, as much as will serve to boil the Fox.

Boil the pieces in an Earthen-pot glaz'd within, and cover'd, over a gentle fire, till the flesh come from the bones; strain the broth, and throw away the squeez'd flesh of the Fox.

Tunc

℞. *Summitatum Thymi, &*
Anethi recentium, an. M ij.
Salviæ,
Rorismarini, &
Chamæpityos, an. M j.
Olei communis, ℔ iiij.

Then

℞. Tops of Thyme, and
Dill fresh gather'd, M ij.
Sage,
Rosemary, and
Ground-Pine, *an.* M j.
Common Oyl, ℔ iiij.

Return the Broth into the Pot; and having put in the Herbs, and the Oyl prescrib'd, cover the Pot very close; and after you have let it stand 24 hours in the luke-warm Bath, make the Bath boil for two hours together; then having strain'd and strongly press'd out the whole substance, and separated the Oyl from the Feces, put it up for your use.

Though the Ancients in the preparation of this Oyl, boil'd the Fox in Oyl, adding water and salt requisite; yet the Method of boiling the Fox first in water and salt, is in my opinion much better, as well to prevent the alteration of the Oyl by the fire by a long Coction, as for the more plentiful extraction of the succulent Juice of the Fox, which dissolves more easily in salt without oyl, then if the oyl were mingl'd with it. As for the Aromatic Herbs, their vertue exhales far less, being sufficiently imparted to the oyl by their Infusion, and boiling in the oyl and broth, then if you should have put them in at the beginning to boil with the Fox, as the Ancients direct.

Oyl of Fox powerfully digests and discusses cold humours that fall upon the nervous and membranous parts. It is proper against all cold infirmities of the Joynts, against Rheumatisms, Sciatica's, and cold Gouts. It may be apply'd hot upon the parts alone, or mix'd with other Unguents, or proper oyls.

Oleum Viperinum.

℞. *Viperas viventes magnas pingues & vividas,* N° *xij.*
Olei communis purissimi, ℔ *ij.*
Vini Albi generosi, ʒ *ij.*

Oyl of Vipers.

℞. Live Vipers, large, fat, and vigorous, N°. xij.
Pure common Oyl, ℔ ij.
Strong White-wine, ʒ ij.

Pour the oyl into a glaz'd Earthen-pot with a narrow mouth, and let it boil in a hot Bath till you cannot endure your finger in it; then plunge the Vipers, one after another, into the oyl: when they are stiff'd, pour in the Wine prescrib'd, cover the Pot, and set it a-boiling, till the moisture of the Vipers be almost consum'd; then having strain'd and strongly press'd forth the whole, and separated the oyl from the feces, keep it for use.

Oyl of Vipers is principally commended against the deformities of the skin, as Tetters, Scurf, and Leprous Ulcers. It is also highly esteem'd against those Ulcers which are caus'd by the Venereal Poyson. The use of it is External, us'd alone, or in Liniments, or in Pomatums. It is also recommended to asswage the pain of the Emrods, and to facilitate the delivery of Women, the whole Region of the Belly being anointed therewith.

Oyl of Serpents may be prepar'd after the ſame method, proportionating the Oyl to their largeneſs and thickneſs; and you may make uſe of it for the ſame purpoſes, though you cannot expect the ſame effects as from Oyl of Vipers.

Oleum Lacertarum.	*Oyl of Lizards.*
℞. *Olei expreſſi Nucum jnglandium depurati,* ℔ *iij.*	℞. Preſs'd Oyl of Wallnuts depurated, ℔ iij.
Vini Albi, ʒ *iij.*	White-wine, ʒ iij.

Put them into a glaz'd Earthen-Pot with a narrow mouth, ſet it in *Balneo Mariæ*, and boil the Ingredients till you cannot endure the heat with your Finger.

Tunc	*Then*
Accipe Lacertas, viventes, virides, & vividas, N° xij. vel xv. vel xx. pro ratione magnitudinis.	Take live, green, vigorous Lizards N° xij. or xv. or xx. as they are in bigneſs.

Suffocate them in the ſcalding Oyl, and having well-ſtopp'd the Pot, boyl them to the conſumption of their moiſture, then ſtrain and preſs them, and reſerve the pure oyl.

'Tis impoſſible to limit the number of Lizards, by reaſon ſome are bigger ſome leſs; and therefore it is left to the judgment of the Artiſt to take no more than will ſuffice for the oyl. But take heed of the Directions of the Ancients in the compoſition of their oyl, as well as of thoſe of Vipers and Serpents, who after they had ſtifled theſe Animals in the oyl expos'd them to the Sun. For they preſently putrifie, and infect the oyl with an inſupportable ſtink, ſo far they are from communicating any vertue to it: which is prevented this way.

Oyl of Lizards has been recommended from time to time to make the Hair grow. It is a ſpecific to cure the deſcent of the Inteſtines or Burſtneſs. To which purpoſe, firſt put up the Bowel in its place, and anoint the part with this oyl warm'd: Then laying upon it the Pannicle that invelops the Inteſtines of any Animal whatever, moiſten it with this oyl, and ſtrow it over with ſome aſtringent powder, binding on a good Pillow to keep the Bowel tite. This paſſes currant for a certain Remedy, the Tryal whereof can do no hurt.

Oleum Myrrhæ per deliquium.	*Oyl of Myrrh by draining.*
℞. *Ova Recentia N° xij. vel quantum libuerit.*	℞. New-laid Eggs N° xij. or what you pleaſe.

Harden the Eggs in boiling-Water, take off the Shells, and ſlit the Eggs full in the middle from one end to the other; then put into the Concavities of the Whites powder of Myrrh finely pulveriz'd; then join both pieces together, and having bound them lightly together with a ſtring, hang them up in a Cellar, or a cool place, with a Veſſel under them, for the liquor to drop into them, which will be a diſſolution of a good part of the Myrrh in the watry part of the white of the Eggs. Pour this Liquor into a little Glaſs-Cucurbit, and having plac'd it in a *Balneo Mariæ* luke-warm, evaporate about a fourth part, which is only the ſuperfluous moiſture, that would have putrifi'd the oylie Liquor, by any long continuance with it.

Oyl of Myrrh is recommended againſt all deformities of the Skin. It is us'd with advantage to take away blemiſhes and ſcars in the Face; as alſo to cure the Itch, Tetters, and Ulcers. It is onely for external uſes, either alone, or mix'd with Pomatums and vulnerary Injections.

Both the old and new Diſpenſatories are cramm'd with Receipts of ſeveral other *Oyls*, highly commended by the Inventer, but I thought it not convenient to ſwell this Pharmacopœa with any more to little purpoſe.

CHAP.

CHAP. III.

Of Balſomes.

THe great Affinity that Balſoms have with Oyls, is the reaſon that I thought it requiſite to treat of their preparations in the next place. Balſoms are either Natural, or Artificial: Thoſe which are Natural I paſs over, as having no need of preparation. Artificial Balſoms are compound Remedies, moſt commonly externally apply'd, ſome of which are of a conſiſtence more ſolid then that of ordinary Oyntments, and are prepar'd principally for their good odour, and to recreate and fortifie the Noble parts: Others are more liquid, of a conſiſtence between Oyls and Liniments, the principal uſe whereof is for wounds, though they are prepar'd for the moſt part of diſeaſes, for which Liniments and Oyntments are prepar'd.

There are alſo diſtill'd Balſoms compos'd of ſeveral Aromatics, and divers diſtill'd Oyls; but theſe are rather Chymical then Galenical, and rather for inward then outward application; and it would be to little purpoſe to inſert preparations in this *Pharmacopœa*, ſeldom us'd, which may be found in a great number of Diſpenſatories.

Preſs'd Oyl of Nutmegs, by reaſon of its ſolidity, when it is grown thick, is the moſt uſual Baſis of all odoriferous Balſoms, to ſtop the fluidity of the diſtill'd Oyls which compoſe them, and to prevent the Balſom from running about the Pockets of thoſe that carry them. But in Balſoms where odour is not minded ſo much as the ſaving of expence, ſometimes white Wax is us'd, and ſometimes Lambs or Kids fat; ſometimes Deer's or Veal-Marrow, and ſometimes Manna in Tears. And becauſe it is ſometimes deſir'd that theſe ſubſtances ſhould be altogether void of ſcent, to the end that not being able to impart of themſelves, they may be fit to receive the odours of diſtill'd oyls, or other Aromatic ſubſtances, we make uſe of Spirit of Wine tartariz'd, which we pour upon the oyl of Nutmegs, or upon the Wax, Fats or Marrows, about a fingers-breadth above the Matters, and after three days digeſtion, draw off the Spirit of Wine with a gentle fire, by that means finding a white matter at the bottom void of ſcent.

Balſamum Apoplecticum.		*Apoplectic Balſom.*	
℞. *Olei Nucis Moſchatæ expreſſi,*	℥ j.	℞. Preſs oyl of Nutmegs,	℥ j.
Reſinæ Styracis,	℥ ij.	Roſin of Storax,	℥ ij.
Balſami Indici,		Indian-Balſom,	
Ambregriſiæ, an.	℥ j ß.	Ambergriſe, *an.*	℥ j ß.
Zibethi Veri,	℈ iiij.	True Civet,	℈ iiij.
Moſchi Orientalis,	℥ j.	Oriental Musk,	℥ j.
Olei ſuccini rectificati,	℥ ß.	Rectifi'd oyl of Amber,	℥ ß.
Olei Cinamomi ſtillatitii,	℈ j.	Diſtill'd oyl of Cinnamon,	℈ j.
Oleorum ſtillatitiorum Lavendulæ,		Diſtill'd oyls of Lavender,	
Marjoranæ,		Marjoram,	
Rutæ,		Rue,	
Caryophyllorum, an.	*gr. xv.*	Cloves, *an.*	*gr.* xv.
Citri,		Citron,	
Arantiorum, &		Oranges, and	
Ligni Rhodii, an.	℈ ß.	Lignum Rhodium, *an.*	℈ ß.
Gagatis,	*gr. vj.*	Agate,	*gr.* vj.

Having finely powder'd the Musk and Ambergriſe in a little Braſs-Mortar, mixing therewith the leaſt drop of one of the diſtill'd oyls, melt the oyl of Nutmegs in a Silver-ſpoon over a very ſoft fire, and when it is melted, and half cool again, incorporate with it the Roſine of Storax, the Balſom of *Peru*, the Musk and Ambergriſe; then add the Civet, and the diſtill'd oyls, and having well mix'd them, the Balſom is made.

They who have a warm hand, and can have the patience, may mix all the Ingredients in the palm of their hands, firſt melting the oyl of Nutmegs by degrees, by tempering it, and preſſing it with a Silver-Spatula againſt the palm of the hand; then mixing firſt the

the Storax and Balſom, afterwards the Musk, Ambergriſe, and Civet, and laſtly, the diſtill'd Oyls; by this means the Balſom will be leſs in danger to loſe its ſubtle parts, then by making uſe of the fire.

This Balſom bears the Name of *Apoplectick*, by reaſon it is a great Remedy againſt Apoplexies, and all diſeaſes of the Brain, which it powerfully fortifies, together with all the Noble parts. It is alſo highly recommended for its excellent Odour, as being not only delightful, but a great preſervative againſt ill ſmells and peſtilential Air. It operates in a ſmall quantity, never carrying above half a grain at a time, when only for the odours ſake: But ſeveral times as much may be us'd in diſeaſes of the Brain, to anoint the Temples, and Sutures of the head, or to put into the Ears with a little Musk'd Cotton.

Balſamum aliud Apoplecticum.

℞. *Olei Nucis Moſchatæ expreſſi, &*
Ceræ Albæ, an. ℥j.
Oleorum Roriſmarini,
Salviæ,
Lavendulæ,
Succini,
Rutæ,
Majoranæ,
Gagatis,
Caryophyllorum, an. ʒj.
Balſami Peruviani, ʒij.

Another Apoplectic Balſom.

℞. Preſs'd oyl of Nutmegs, and
White Wax, *an.* ℥j.
Oyls of Roſemary,
Sage,
Lavender,
Amber,
Rue,
Marjoram,
Jet,
Cloves, *an.* ʒj.
Balſom of Peru, ʒij.

This Balſom is to be prepar'd like the former, the firſt way; though it might be done the ſecond, not making above the eighth part at a time.

This Balſom has not ſo pleaſing a ſcent as the former, but it is of great vertue againſt all diſeaſes of the Head, and againſt Peſtilential Air. It is alſo good to ſuppreſs the vapours of the Matrix.

Balſamum Hypnoticum.

℞. *Olei Nucis Moſchatæ expreſſi, &*
Unguenti Populei, an. ℥j.
Medullæ Cervinæ,
Olei Roſati, &
Nymphææ, an. ʒiij.
Oleorum expreſſorum ſeminis Hyoſcyami, &
Papaveris Albi,
Extracti Opii, &
Croci, an. ʒij.
Ambragriſiæ,
Moſchi,
Zibethi, &
Olei ſtillatitii Ligni-Rhodii, an. gr. viij.

A Balſom to provoke Sleep.

℞. Preſs'd oyl of Nutmegs, and
Unguentum Populeum, *an.* ℥j.
Deer's Marrow,
Oyl of Roſes, and
Water-Lilleys, *an.* ʒiij.
Preſs'd oyls of Henbane-ſeed, and
White-Poppies,
Extract of Opium, and
Saffron, *an.* ʒij.
Ambergriſe,
Musk,
Civet,
Diſtill'd oyl of Lignum-Rhodium, *an. gr.* viij.

Moiſten the Extracts of Opium and Saffron with never ſo little good Spirit of Wine, then incorporate them by degrees over a gentle fire with the oyl of Nutmegs, Deers Marrow, and Poplar oyntment; after that, add the oyls, and laſtly the Ambergriſe, pulveriz'd and incorporated with the Civet. This Balſom was invented gently to provoke Sleep, and to aſſwage the pains of the Head that accompany continual Fevers, and ſometimes intermitting: To which purpoſe, put up a ſmall quantity into the Noſtrils, or into the Ears, you may alſo anoint the Temples and Wriſts, and rub the Soles of the Feet: It may be alſo us'd among Medicaments for Frontals, dry or moiſt, rubbing the out-ſide of the Frontal with it, which ought to be apply'd to the Forehead, and ought to contain the Ingredients of the Frontal.

Balſamum Stomachicum.

℞. *Olei Nucis Moſchatæ expreſſi,* ℥ *ij.*
Abſinthii Vulgaris,
Maſtichini,
Nardini, &
Ceræ Albæ, an. ℥ *vj.*
Oleorum Stillatitiorum Abſinthii,
Mentæ Criſpæ,
Cinnamomi,
Caryophyllorum,
Thymi, &
Macis, an. ℥*j.*

A Balſom for the Stomach.

℞. Preſs'd oyl of Nutmegs, ℥ ij.
Oyls of common Wormwood,
Maſtich,
Nard, and
White Wax, *an.* ℥ vi.
Diſtill'd Oyls of Wormwood,
Criſped Mint,
Cinnamon,
Cloves,
Thyme, and
Mace, *an.* ℥ j.

The preparation of this Balſom requires no more, then to melt the white VVax and the Oyl of Nutmegs over a very gentle fire, and to incorporate the Oyls preſcrib'd, when they are off from the fire.

It is very proper to heat and fortifie the Stomach, ſo that it may be advantageouſly made uſe of to ſtay Vomiting, help Digeſtion, create an Appetite, aſſwage pains of the Stomach, Colics, and Dyſenteric Gripes: It is alſo very effectual in cold diſtempers of the Brain and Nerves, the parts being anointed therewith.

Balſamum Uterinum.

℞. *Sevi Hircini,* ℥ *ij.*
Lachrymarum Galbani, &
Aſſæ-fœtidæ,
Pinguedinis in Cyſtide Caſtoreorum contentæ, an. ℥*j* ß.
Oleorum Stillatitiorum ſuccini,
Gagatis,
Rutæ, &
Sabinæ, an. ℥ *ij.*

A Balſom for the Womb.

℞. Goats Tallow, ℥ ij.
Tears of Galbanum, and
Aſſa-fœtida,
The fat contain'd in the Veſicle of the
Caſtors, *an.* ℥ j ß.
Oyls diſtill'd of Amber,
Jet,
Rue, and
Savine, *an.* ℥ ij.

Heat a Braſs-Mortar to a moderate degree of heat, and having incorporated them with the unctuous part of the Caſtor, and the diſtill'd oyls, melt the Goats Tallow in a ſmall Frying-pan, and when it is half cold, mix all together.

This Balſom apply'd hot to the hollow pit of the Navel, covering the part at the ſame time with the half of a Wall-nut-ſhell, is an excellent Remedy againſt the vapours of the Matrix, the pains whereof it aſſwages. You may alſo put up never ſo little into the Noſtrils, and anoint the out-ſide of the throat therewith. It is alſo good to provoke the *Menſtruums*.

Balſamum pro puerulis dentientibus.

℞. *Butyri Mayalis non ſaliti,* ℥ *iij.*
Pinguedinis Gallinæ, &
Anatis, an. ℥ *ij.*
Succi Cancrorum fluviatilium contuſorum cum aqua florum Cyani extracti, &
Mucilaginis Radicis Althææ, an. ℥ *ij.*

A Balſom for Children breeding Teeth.

℞. *May*-Butter without any Salt, ℥ iij.
Hen's fat, and
Duck's fat, *an.* ℥ ij.
Juice of River-crabs bruis'd, extracted
with water of Blew-bottle flowers, and
Muſcilage of the Root of Althea, *an.* ℥ ij.

Beat two or three River-crabs in a Marble-Mortar with a wooden-Peſtle, and having moiſten'd them with a little Blew-bottle water, preſs out two ounces of the Juice: Prepare alſo two ounces of Muſcilage of Marſhmallow-roots, put them together with the *May*-Butter, Hens and Ducks Greaſe, into a glaz'd Earthen-pot, and boil them over a gentle fire, to the conſumption of half the moiſture; then ſtrain them, and add,

Sacchari

Sacchari Candi ſubtiliter pulverat.	℥ iiij.	Sugar-Candy finely powder'd,	℥ iiij.
Vitellum unum Ovi,		One Yolk of an Egg,	
Moſchi, &		Musk, and	
Ambrægriſiæ, an.	*gr. vj.*	Ambergriſe, *an.*	*gr.* vj.

Incorporate them well together, and the Balſom is made.

This Balſom has been experimented for its Excellency, to ſoften the Gums of Infants, whoſe Teeth are ready to cut: Their Nurſes muſt be careful to anoint them often. The uſe of it is no way inconvenient, for being pleaſing to the taſte, it can do no harm, though it be ſwallow'd.

Balſamum Egregium pro Manibus.

℞. *Saponis Veneti ex ſucco Limonum diluti,*	℔ ß.	℞. Venice-Sope diſſolv'd in Juice of Lemons,	℔ ß.
Mellis Virginii albi,	℥ *ij.*	White Virgin-Honey,	℥ ij.
Talci Veneti,		Venetian-Talk,	
Sacchari-Candi, &		Sugar-Candy, and	
Radicis Ireos ſubtiliter pulveratorum, an.	℥ ß.	Root of Ireos, or Orrice, purely powder'd, *an.*	℥ ß.
Salis Tartari,		Salt of Tartar,	
Boracis, &		Borax, and	
Spermatis Cete recentis, an.	℥ *ij.*	Sperma-Cete, *an.*	℥ ij.
Balſami Peruviani,	℥ j.	Peruvian-Balſom, *an.*	℥ j.
Olei Ligni-Rhodii,		Oyl of Lignum-Rhodium,	
Cinnamomi,		Cinnamon,	
Caryophillorum, an.	℈ ß.	Cloves, *an.*	℈ ß.
Moſchi Orientalis,		Oriental Musk,	
Ambrægriſiæ, an.	*gr. xij.*	Ambergriſe,	*gr.* xij.

An Incomparable Balſom for the Hands.

Cut the Sope ſmall, and put it into a glaz'd Earthen-pot, and diſſolve it over a gentle fire in two ounces of Juice of Lemons; then add the Honey, the Sperma-Cete next, with the Balſom: then take the Pot off the fire, and by degrees incorporate the Powders; and laſtly, the Musk, Ambergriſe, and diſtill'd oyls.

The Talk is eaſily powder'd, being firſt laid before a quick fire for a quarter of an hour, and then beaten in a Mortar heated with a hot Peſtle, and then ſifted.

This Balſom whitens, cleanſes, and ſmooths the Skin, beyond any paſte or *Pomatum* that can be prepar'd. 'Tis enough to rub the hands with it; nor is there any need of waſhing afterwards.

Balſamum Sulphuris commune.

℞. *Olei nucum juglandium expreſſi,*	℔ ß.	℞. Preſs'd oyl of Wall-nuts,	℔ ß.
Florum Sulphuris,	℥ *j.*	Flowers of Sulphur,	℥ j.
Salis Tartari,	℈ *ij.*	Salt of Tartar,	℈ ij.
Vini Albi,	℥ *ij.*	White-wine,	℥ ij.

Common Balſom of Sulphur.

Put the Flowers of Sulphur, and the Salt of Tartar, into a ſmall glaſs-Cucurbit, and pour upon them the Oyl, and the White-wine: mix them well together, and ſet the Cucurbit over a gentle fire of Digeſtion for eight hours, ſtirring the Ingredients from time to time; then augment the fire, and boil the Balſom till the moiſture be almoſt conſum'd. Take the Cucurbit from the fire, and when the Cucurbit is cold, ſeparate the Balſom by Inclination from the Fæces, and keep it in a Glaſs-bottle ſtrong, and cloſe ſtopt.

The Salt of Tartar is added to aſſiſt the diſſolution of the Flowers of Sulphur, and to heighten the red colour of the Balſom.

This Balſom of Sulphur is highly commended to digeſt, and diſcuſs crude matters gather'd

ther'd together in any part of the body. It is only us'd externally, and it is the Baſis of *Emplaſtrum Diaſulphuris*.

Some make uſe of Oyls of Sweet-Almonds, white Poppy-ſeeds, or Turpentine, inſtead of Oyl of Wall-nuts.

Others alſo that make it a Compound Balſom, add Myrrh, Aloes, Saffron, and ſeveral other Ingredients; which ſince there is no neceſſity of them, I omit for brevities ſake.

Balſamum Sulphuris Aniſatum.		*Balſom of Sulphur with Anniſeed.*	
℞. *Florum Sulphuris,*	℥ *j.*	℞. Flowers of Sulphur,	℥ j.
Olei ſeminis Aniſi expreſſi,	℥ *vj.*	Preſs'd Oyl of Anniſeed,	℥ vj.

Put them into a Matraſs, ſtop it exactly, and ſet it in digeſtion over a moderate fire, till the Flowers of Sulphur be almoſt quite diſſolv'd in the Oyl. Take off the Matraſs; and when the Ingredients are cool, ſeparate the Balſom by inclination from the Feces, and put it up in a Bottle well ſtopt.

The volatility of the Oyl of Anniſe requires that the Matraſs ſhould be well ſtopt; but you muſt be careful, in the time of digeſtion, to ſhake the ſubſtances often to haſten the diſſolution of the Flowers.

Diſtill'd Oyl of Anniſeed would do better; but being more volatile, and ſubject to diſſipation, and it being impoſſible to ſhut the Matraſs ſo cloſe, but that the Balſom would be waſted in quantity, we are forc'd to uſe the other.

Some believe this Balſom little inferiour to natural Balſom, becauſe it moderately heats, and dries, and preſerves from Corruption. It is highly recommended in infirmities of the Breaſt, chiefly againſt Coughs, Aſthma's, Pleuriſies, and Ulcers of the Lungs: It is very good againſt weakneſſes and indigeſtion of the Stomach, it reſtores the Appetite, diſſipates Wind. It is highly recommended alſo againſt the Peſtilence, and all Epidemic Diſeaſes, Venereal Diſtempers, continual and remitting Fevers. It is taken inwardly in cõvenient Liquors, from three to ten or twelve drops. For infirmities of the Stomach, and Colics, you may anoint the Stomach and Navel therewith.

Balſamum *Arcæi.*		Arceus's *Balſom.*	
℞. *Sevi Hircini,*	℔ *ij.*	℞. Goats Greaſe,	℔ ij.
Terebinthinæ Venetæ, &		Venice-Turpentine, &	
Gummi Elemni, an.	℔ *i* ß.	Gum Elemmi, *an.*	℔ i ß.
Axungiæ Porci,	℔ *j.*	Hogs fat,	℔ j.

Melt the Gum over a very gentle fire, cut before into ſmall pieces; then add the Turpentine, the Goats Tallow, and Hogs Greaſe; and when they are all well diſſolv'd, ſtrain them through a new Cloth, to ſeparate the filth of the Gum, if there be any: When it is cold, put it up for uſe.

Arceus's Balſom is very much eſteem'd and us'd to incarnate and conſolidate all ſorts of Wounds and Ulcers; as alſo for Fractures and Diſlocations of the Bones, and to heal Contuſions, and hurts of the Nerves. This Balſom is very much us'd, though the Receipt be in few Diſpenſatories.

Balſamum Hiſpanicum.		*The Spaniſh Balſom.*	
℞. *Frumenti integri,*		℞. Whole Wheat,	
Radicum Valeriana, &		Roots of Valerian, and	
Cardui Benedicti contuſarum, an.	℥ *j.*	Bleſſed-thiſtle bruis'd, *an.*	℥ j
Vini Albi,	℔ j.	White-wine,	℔ j.

Put them into a narrow-mouth'd glaz'd Earthen-pot, and ſet it, being cloſe ſtopt, 24 hours in Maceration; then adding ſix ounces of Oyl of S. *John*'s Wort, boil them

in a hot *Balneum Mariæ*, to the conſumption of the Wine, then ſtrain and preſs out the whole.

Poſtea		*Afterwards*	
℞. *Thuris electi, ſubtiliter pulverati,*	℥ *ij.*	℞. Select Frankincenſe finely pulveriz'd,	℥ ij.
Terebinth. Venet.	℥ *viij.*	Venice-Turpentine,	℥ viij.

Melt them together, by degrees, over a gentle fire, and mix them with the aforeſaid Oyl; and ſo the Balſom is made.

Fabricius ab Aquapendente made great uſe of this Balſom, and with good ſucceſs; ſo that ſome have made him the Author of it. It is wonderfully eſteem'd for the cure of all ſorts of Wounds, as alſo which happen to the nervous parts, which ſome affirm it will cure in four and twenty hours, obſerving the following directions. Firſt, waſh the wound with good cold White-wine, then anoint the wound with this Balſom hot; if the wound be deep, ſyringe it with the hot Balſom, and bind the ſides of the wound with Ligatures, Swaths and Bolſters, anointing at the ſame time the ſides, and round about the wound with the Balſom; then lay upon it a Bolſter ſteep'd in ſtrong Wine, and preſs'd out again, and upon the top of that another dry one.

Balſamum viride Metenſium.		*The green Balſom of* Metz.	
℞. *Olei ſeminis Lini expreſſi, & Olivarum, an.*	℔ *j.*	℞. Oyls of Line-ſeed preſs'd, and Of Olives, *an.*	℔ j.
Laurini,	℥ *j.*	Laurel-Oyl,	℥ j.
Terebinthinæ Venetæ,	℥ *ij.*	Venice-Turpentine,	℥ ij.

Melt them together over a very gentle fire in a Frying-pan; when they are cold, mix therewith by degrees,

Olei ſtillatitii baccarum Juniperi,	℥ ß.	Diſtill'd Oyl of Juniper-Berries,	℥ ß.
Viridis æris ſubtiliter pulverat.	℥ *iij.*	Verdigriſe finely powder'd,	℥ iij.
Aloes Succotrinæ ſubtiliter pulveratæ,	℥ *ij.*	Aloes-Succotrine finely powder'd,	℥ ij.
Vitrioli Albi,	℥ *j* ß.	White-Vitriol,	℥ j ß.
Olei Caryophyllorum,	℥ *j.*	Oyl of Cloves,	℥ j.

Mix the Powders firſt, and then add the diſtill'd Oyls; and when the whole is well incorporated, the Balſom is made.

Schroderus ſets down this Balſom in his Book, ſaying, that Mounſieur *du Clos*, a Phyſitian of *Metz*, imparted it to him for an Excellent Receipt, as indeed it is, for all ſorts of wounds, either by Sword or Bullet, being firſt waſh'd with warm Wine, and then anointed with this Oyntment alſo warm, laying over all the Styptic Plaiſter which I ſhall hereafter deſcribe. It cleanſes, Incarnates and Cicatrizes: It is alſo ſingular againſt the cure of venomous Beaſts, and fiſtulous and malignant Ulcers.

Balſamum Samaritanum.		*The Samaritan Balſom.*	
℞. *Olei Communis, Vini generoſi, an.*	*Partes æquales.*	℞. Common Oyl, Strong Wine, *an.*	Equal parts.

Boil them together over a very gentle fire in a glaz'd Earthen-pot, to the conſumption of the Wine.

This is the Balſom which the *Samaritan* in the Goſpel is ſaid to have made uſe of; and though it be plain, it is not to be deſpis'd, being of excellent uſe to conſolidate ſlight and green wounds.

Balſamum Balſaminæ,		*Balſom of the Balſom-Apple Plant.*	
℞. *Florum, Foliorum, & fructuum Balſaminæ, an.*	℥ *iiij.*	℞. Flowers, Leaves and Fruit of the Balſom-Apple Plant, *an.*	℥ iiij.

Radicum

Radicum Conſolidi majoris,	Roots of larger Conſound,
Ariſtolochiæ Rotundæ,	Round Birth-wort,
Valerianæ majoris, an. ℥ *ij.*	The bigger Valerian, *an.* ℥ ij.
Viſci in folliculis Ulmi reperti,	The Slime found in the little Bladders of the Elm-leaves,
Succi Cancrorum fluviatilium,	Juice of River-Crabs,
Foliorum Pervincæ,	Leaves of Perwincle,
Saniculæ,	Sanicle,
Summitatum floridarum Hyperici, &	Flowry-tops of S. *John*'s Wort, and
Galei lutei, an. ℥ *j* ß.	Yellow Ladies Bed-ſtraw, *an.* ℥ j ß.
Olei Olivarum, ℔ *iiij.*	Sallet-oyl, ℔ iiij.

Bruiſe thoſe Ingredients which are to be bruis'd in a Mortar, and put them in a Glaſs-veſſel well ſtopt; ſet the Pot twelve days in the Summer-Sun, then boil the Ingredients in a hot Bath, to the Conſumption of the moiſture; after that, ſtrain and preſs the whole; and having ſeparated the Oyl from the Fæces, incorporate with it half a pint of diſtill'd Oyl of Gum-Sandarach.

This Balſom muſt be kept in a Glaſs-bottle very cloſe ſtopt; it is commended for the cure of all ſorts of wounds, eſpecially thoſe of the nervous parts. It is very good to cure Burns: It appeaſes the pains of the Emrods, reunites and conſolidates the clefts of the Breaſts, eſpecially if you add never ſo little Camphire. It takes away ſcars from the Skin, being mix'd with Oyl of Eggs.

Balſamum dolorem levans.

A Balſom eaſing Pain.

℞. *Foliorum Urticæ urentis,*	℞. Leaves of the Burning-nettle,
Plantaginis,	Plantain,
Mercurialis, &	Mercury, and
Majoranæ, an. M *iij.*	Marjoram, *an.* M iij.
Olei nucis Juglandis expreſſi, ℔ *x.*	Preſs'd Oyl of Nutmegs, ℔ x.
Vini-Albi, ℔ *ij.*	White-wine, ℔ ij.

Beat the Herbs in a Marble-Mortar, and put them with the Oyl and Wine into a narrow-mouth'd glaz'd Earthen-pot; cover the Pot, and ſet it upon the hot Embers for twenty four hours; then cauſe the Ingredients to boil gently, till the Wine be almoſt conſum'd; then ſtrain and preſs the whole, and having ſeparated the Balſom from the Fæces, put it up for uſe.

This Balſom is particularly recommended to appeaſe pains in the Joynts, as well thoſe that proceed from any wound, ſting, or bruiſe, or from the falling of any ſharp humour upon any part: It gives preſent eaſe by anointing the part, eſpecially if the part be open'd.

CHAP. IV.

Of Embalmings of Dead Bodies.

THe Corruption and Stench which ariſes from the Coffins of Princes, and Great Perſonages, though Embalm'd after their Deceaſe, has given me occaſion to believe, that ſuch accidents could not proceed, but either from the covetouſneſs or ignorance of thoſe that undertake the Embalming: And therefore I have here made bold to impart to public view, that method which I have obſerv'd in Embalming the Bodies of ſeveral conſiderable Perſons of both Sexes, and of ſome Princes alſo; to the end, that they who have care of their Reputation, and will ſpare nothing to acquit themſelves with an Honeſty becoming their Imployment may find ſucceſs.

It is not neceſſary that I ſhould here dilate upon the manner of Embalming Bodies, which the *Egyptians* and other Nations made uſe of heretofore, and of which many Authors have written; among the reſt, *Peter Belon*, of the Country of *Mayne*, in a Trea-

tiſe entitl'd, *De Medicato Funere*; Printed at *Paris* in the Year 1553. For though we meet with Remarkable Evidences of the Art of the Ancients in this particular, yet we are ignorant both of the Ingredients and Quantities which they made uſe of.

The Name of *Mummy* is giv'n to Bodies Embalm'd with Aromatic Drugs, or elſe to ſuch as are cover'd and dry'd in the Sands of *Lybia* by the heat of the Sun; ſometimes alſo to the Liquor, which flowing from the Coffins of great Princes Embalm'd, dries in the Sepulchre, and becomes as hard as the Embalm'd Fleſh.

The Corruption of Dead Bodies, proceeding from their ſuperfluous moiſture, augmented by that of the Ambient Air, there is therefore great care requir'd to conſume and ſuck up that ſuperfluous moiſture, and to prevent the Air from entring in. Quick-Lime is very fit to conſume the moiſture of dead bodies, and to hinder the penetration of the Air; but becauſe it is apt to conſume the ſoft parts of the Fleſh, and to leave only the Skeleton, it is not to be meddl'd withal, but where there is an intention only to preſerve the bones of the body. Dead bodies alſo diſimbowell'd, may be preſerv'd in a ſtrong Pickle, or in Spirit of Wine well rectifi'd, providing a fit Veſſel that may be cloſe ſtopt; but becauſe that is only for a time, and that more laſting means are requir'd, ſome perſons perhaps may not think their time ill ſpent to find them here.

The Aim which I have always had to preſerve the external ſhape of the dead body, eſpecially of the Face, and that to Perpetuity, has ever kept me from making uſe of Oak, Bark, Aſhes, or Lime, which they too frequently make uſe of, that prefer their Gain before their Reputation. For though that Bark-duſt, dry enough of it ſelf, ſeem very proper to ſuck up ſuperfluous moiſture, it is unable to communicate of it ſelf any good quality to the dead body wherein it is put, but is rather ſubject to the putrefaction of the moiſture which it has ſuck'd. As for Aſhes, though the Salt which they contain is eſteem'd very fit to preſerve the dead bodies, yet there is not enough; ſo that it rather ſerves to diſſolve the fleſhy and fat parts, then to hinder their corruption. I ſhall therefore ſet down thoſe ways, which by Reaſon and long Experience I have found moſt proper, and which Mounſieur *D' Aquin*, his Majeſties Chief Phyſitian, deſir'd me to impart to public view.

Though it might be expected that dead bodies might be preſerv'd in a Coffin of Lead, wrapt up in a Powder compos'd of equal parts of Myrrh, Aloes, and Specific Salts, not ſparing for Powder, nor good Spirit of Wine, and ſodering up exactly the Joyntures of the Coffin, as once I did for a Lady of Great Quality, who ſo order'd it before her death; yet the moſt ſure and certain way is this.

Open the Scull behind, about the breadth of the palm of the hand, or thereabouts; and having taken out the Brain, and fill'd and ſtuff'd the Scull with the Powder after-mention'd, clap on the piece again, and ſow it faſt.

Then make an Inciſion of the skin, and fatty part, from that part of the Breaſt, where the Ribs meet below the Navel, and another Inciſion a-croſs, in the ſame skin and fat part, about a foot and a half long, ſo as to lay open the Region of the Liver, Spleen, and Stomach; and having ſeparated the whole from the *Sternum* with a Razor, on both ſides in the Muſcilaginous parts, and rais'd the *Sternum* againſt the face of the body, take out the Tongue, the Eyes, the Lungs, the Heart, the Liver, the Spleen, the Stomach, the Inteſtines, and all the parts contain'd in the hollow of the body: Make alſo two or three Inciſions all along in each Arm, and each Leg, according as the body is more or leſs fat and fleſhy. Make alſo more and deep Inciſions in the Buttocks and Thighs, and from the Neck to the Buttocks in the Back, ſeparating the skin and the fat parts with a Razor; make alſo five or ſix in the Neck, and two in the ſoles of each Foot, and the palms of each Hand: Some bodies are ſo fat and fleſhy, that you muſt be forc'd to pare off ſome part of the fat and fleſh, and mingle them with the Entrails, though there's no neceſſity for it, where Coſt is allow'd.

After you have well ſuckt up the blood and ſeroſities with Spunges, bath and waſh the parts with good Spirit of Wine, and then rub them with good Spirit of Salt: Then fill every hole and Cranny, all the ſpaces between the fat skin and the fleſh, the Mouth, the Throat, the Eye-holes, and Noſtrils, with the following Powder.

Pulvis ad implendas Cadaverum Cavitates.		*A Powder to fill the Concavities of Dead Bodies.*	
℞. *Myrrhæ,*		℞. Myrrh,	
Aloes,	℔ *xvj.*	Aloes,	℔ xvj.
Salis Tartari, &		Salt of Tartar,	
			Tamariſci

Tamariſci,		Tamarisk,	
Aſphalti,		Aſphaltum,	
Summitatum ſiccarum Abſinthii,		Dry tops of Wormwood,	
Scordii,		Water-Germander,	
Centaurii minoris,		Leſſer Centaury,	
Radicum ſiccarum Imperatoriæ,		Dry'd Roots of Maſter-wort,	
Gentianæ,		Gentian,	
Angelicæ,		Angelica,	
Carlinæ,		Carline-thiſtle,	
Ariſtolochiæ rotundæ, an.	℔ *iij.*	Round Birth-wort, *an.*	℔ iij.
Cardamomi Vulgaris,		Vulgar Cardamom,	
Piperis Longi,		Long Pepper,	
Zinziberis, an.	℔ *iiij.*	Ginger, *an.*	℔ iiij.
Cinnamomi,		Cinnamon,	
Caryophyllorum,		Cloves,	
Labdani,		Labdanum,	
Acori veri, an.	℔ *ij.*	True Acorus, *an.*	℔ ij.

All this Powder will be but little enough if the body be large, and that you Embalm all the Entrails; for you muſt not leave the leaſt Cavity unſought, but fill every corner, and every vacuity, as full as the skin will hold; then ſprinkle the Powder, with good Spirit of Wine, to the end it may imbody; and having ſow'd up the skin where it was open'd, anoint the whole body with Peruvian Balſom, and ſtrew as much Powder upon it, as will make a Cruſt about a fingers-breadth thick.

Pulvis ad Cadavera Loricanda.

A Powder to put up Dead Bodies.

℞. *Styracis*,		℞. Storax,	
Benjamin.		Benjamin,	
Ireos Florent. an.	℔ *iiij.*	Florence-Orrice, *an.*	℔ iiij.
Summitatum Marjoranæ,		Tops of Marjoram,	
Florum Arantiorum, & Lavendulæ,		Flowers of Oranges, and Lavender,	
Tacamahaccæ odoratæ, an.	℔ *ij.*	Odoriferous Tacamahacca, *an.*	℔ ij.
Ligni Rhodii,		Lignum-Rhodium,	
Acori veri, an.	℔ *j.*	True Acorus, *an.*	℔ j.
Labdani,		Labdanum,	
Caſſiæ Caryophyllatæ, an.	℔ ß.	Caſſia perfum'd with Cloves,	℔ ß.

Strow this Powder over the whole body, anointing it firſt with Balſom of *Peru*, till it come to be about a finger thick; then wrapping the body up in a Sear-cloth, and putting it up in a Leaden-Coffin, you may carry it as far as you pleaſe, and preſerve it to Eternity.

If the deſign be to keep the body for ſome time, or to ſhew it for ſome Weeks in a Bed of State with the face uncover'd, the body apparell'd, and with Gloves and Shoes on, prepare a white Linnen odoriferous Sear-cloth, which muſt be cut into long Swathes, three or four fingers broad, with which the Arms, Legs and Thighs muſt be ſwath'd by themſelves, and afterwards the whole body, applying the Swathes ſloping upon the Powder; by this means you may cloath the body as if it were living, comb out the hair, and keep the face cover'd, provided you be careful to waſh it often with Spirit of Wine well rectifi'd, and to lay upon it Linnen-cloaths dipt in the ſame Spirit, at ſuch times as the Corps is not publickly expos'd. You may alſo fill a Pillow fullo f the Aromatic Powder laſt deſcrib'd, and put it under the head of the body, and lay other little Cuſhions by the ſides, and at the feet of the ſaid body.

Tela Cerata Aromatica.

An Aromatic Linnen Sear-cloth.

℞. *Ceræ Albæ*,	℔ *vj.*	℞. White Wax,	℔ vj.
Olei expreſſi nucis moſchatæ,		Preſs'd Oyl of Nutmegs,	
Oleorum ſtillatitiorum Lavendulæ,		Diſtill'd Oyls of Lavender,	
Corticis Arantiorum & Citri, an.	℥ *ij.*	Orange and Citron-peels, *an.*	℥ ij.

Melt

Melt the Wax over a very gentle fire in a Tin-Baſon, large above, and narrow below; then having well mix'd the Oyls, dip therein a fine Linnen-cloth equally ſpun.

As for the Brains and Internal parts, you may Embalm them with the firſt Powder. To which purpoſe, having waſh'd the Inteſtines, and made long and deep Inciſions in the Heart, Lungs, Liver, Spleen and Kidneys, and made ready a Leaden-Barrel, cover the bottom with a good quantity of the Powder; then range the Inteſtines well fill'd with the Powder one by another, not ſparing to fill all the Concavities between them with the Powder, till the Barrel be quite full: then ſoder up the Barrel exactly, by which means all thoſe parts will turn into a Maſs, fit to be preſerv'd as long as the Barrel it ſelf. You may alſo, if you are ſo deſir'd, put the Heart in a Leaden box by it ſelf.

Nor will the body be leſs preſerv'd, if after it has lain in State as long as is requiſite, you rub the uncover'd parts with Balſom of *Peru*; and then ſtrowing the Powder upon them, cover them up with the Sear-cloth, and ſo put the body into a Coffin well ſoder'd.

CHAP. V.

Of Oyntments, Liniments, and Sear-cloths.

OYntments, Liniments, and Sear-cloths, are compound Medicaments, principally appointed for Unctions and exteriour applications upon divers parts of the body. Liniments, Unguents, and Sear-cloths, differ chiefly in their conſiſtency, of which Unguents keep the middlemoſt. Oyls are the uſual Foundations of Oyntments, Liniments, and Sear-cloths: To them are added Wax, Greaſes, Tallows, divers parts of Plants, Animals, and Minerals, as well for the vertues which they afford them, as to give a conſiſtence to the Oyls, and to compoſe the Remedies which by a long ſtay upon the place affected, may communicate their vertue to it: Not but that Liniments and Oyntments may be compos'd of ſeveral ſorts of Fats and Greaſes, without Oyl or Wax, as among the reſt Pomatums are made, and ſometimes without Oyl, without Fat, or without Wax, as *Unguentum Egyptiacum*: But you ſhall meet with many more Oyntments, of which Oyl is the chief Foundation, and which receive their conſiſtence from Wax, then which are made without either Oyl or Wax. But a true Sear-cloth cannot be made without Wax, as being that which gives it its Name.

The ordinary proportion of Oyl and Wax in the Compoſition of Oyntments, is three ounces of Wax to twelve ounces of Oyl; and if you are to mix any Powders, you may put in from one ounce to two, and ſometimes you may exceed the proportion. In the Compoſition of Sear-cloths, four ounces of Wax are put to twelve ounces of Oyl; but for Liniments, two ounces of Wax is enough for twelve ounces of Oyl. But regard muſt be had to the Seaſon, for in Summer you muſt put in ſomething more Wax then in Winter. And becauſe that Oyntments contain alſo in them Roſins, Tallows, Suets, and Gums, which are partly put in the place of Wax, the Artiſt muſt be very skilful in rightly proportioning and mixing the Ingredients, that the conſiſtence may be true, and ſightly to the Eye; and which is more then all, in governing his fire, according to the nature of the Oyntments: For all which things, obſerve the following preparations.

Unguentum Roſatum.	*Oyntment of Roſes.*
℞. *Axungiæ Porci Maſculi purgatæ & ſæpius lotæ,*	℞. Barrow's-greaſe cleans'd, and often waſh'd,
Roſarum rubrarum recentium contuſarum, an. ℔ *iiij.*	Freſh Red-roſes bruis'd, *an.* ℔ iiij.

Put the Greaſe and the Roſe-buds into a narrow-mouth'd glaz'd Earthen-pot, cover it well, and ſet it in a Bath, between luke-warm and boiling, for ſix hours; then cauſe the Bath to boil for an hour, and having ſtrain'd and ſtrongly preſs'd out the whole, mix with the ſtrain'd Oyntment,

Roſarum

Roſarum pallidarum recentium contuſarum, ℔. *iiij.*	Pale Roſes newly blown, freſh gather'd, and bruis'd, ℔ iiij.

Stop the Pot again, keep it in a Bath between luke-warm and boiling-hot for ſix hours, and after that let it boil a good long hour; then ſtrain and preſs out the whole again with a good ſtrength: Separate the Oyl from the Feces, and put it up.

If you deſire to give the colour of the Roſes to the Oyntment, about a quarter of an hour before you ſtrain it the laſt time, throw in two ounces of the Roots of Alcanet, or ſomewhat more, if you intend to height'n the colour, and ſtir a little in the Oyntment: If you would keep the white colour of the Oyntment, and the ſweet ſcent of the Roſes, make uſe of Damask-Roſes, without any Alcanet.

Though the Receipts of *Unguentum Roſatum* in the Diſpenſatories be all very near the ſame with that which *Meſue* has left us, and that the Zealots of Antiquity may keep to them, without erring in their Profeſſion; yet we do not find it to be much follow'd by the Apothecaries now-a-days, for every one prepares this Oyntment after their own method: ſome make uſe of Roſes blown, others only of the Bloſſoms; ſome make uſe of red, others pale Roſes; ſome prefer the white, others the Damask-Roſes: Others put in the Roſes whole, others bruiſe them: others after they have mingl'd the Roſes and Boars-greaſe together, expoſe them to the Sun to macerate. But leaving every one to his own judgment, I ſhall only add this, that the Receipt here ſet down is not inferiour to any, either for vertue, or good ſcent.

It is agreed, that Barrow's-greaſe is more firm, and to be preferr'd before that of Sows. The Skins and Tunicles muſt be pick'd out, and the fat waſh'd with clean water, then melted in a glaz'd Earthen-pot, and ſtrain'd from time to time through a clean Linnen-cloth, in order to the preparation of the Oyntment.

You may, in imitation of the Ancients, add a ſixth part of the weight of Oyl of Sweet-Almonds, if you would give it the conſiſtence of a Liniment; but there are few perſons that had not rather that the oyntment ſhould have its true ſolidity. You may alſo make uſe only of the red Roſes; but certain it is, that the pale Roſes here preſcrib'd, render the Oyntment more odoriferous.

An Oyntment of Roſes may be alſo made without fire, as Pomatum's of Jaſmin are prepar'd. Take two Galley-pots, large and flat, pour into each of them melted Barrow's-greaſe well waſh'd and prepar'd, as for ordinary oyntment of Roſes, ſo that there may be left in the hollow of the Pots the thickneſs of a ſmall fingers breadth. Fill the vacuities of the two Pots with Damask-Roſe leaves gather'd early in the morning, and newly blown; then covering the Pots one with the other, ſet them in a Cup-board cloſe ſhut, and keep them there till toward Evening: then throwing away thoſe Roſes, put freſh in their places; and covering the Pots, as before, leave them till next morning. Continue doing thus, till you perceive the Greaſe to be ſufficiently impregnated with the ſcent of the Roſes, and you ſhall have an Oyntment very white, and very odoriferous, which may bear the name of Pomatum of Roſes, and muſt be kept in a Glaſs or Galley-pot cloſe ſtopt. In the ſame manner may be prepar'd Pomatums of Violets, Gilloflowers, and all ſorts of odoriferous Flowers.

Oyntment of Roſes is very much approv'd againſt all ſorts of external Inflammations, particularly Flegmons, Eryſipela's, and Tetters; againſt the pains of the Head, to provoke ſleep gently, temper the heat of the Stomach, Liver and Kidneys, appeaſe the pains of the Emrods, to diſcuſs heat in the Face, and to cure Pimples and little Ulcers that happen therein; as alſo to repreſs ſharp ſeroſities, to ſuppreſs inflammations in the Private Parts of Men or Women, and to cure the heats and pimples that uſually torment Children in their Swadling-cloaths. *Unguentum Roſatum* is alſo us'd for the Baſis of Oyntments, and Pomatums for the Itch.

Unguentum Album, ſive de Ceruſſa.		*White Oyntment, or Oyntment of White-Lead.*	
℞. *Olei Roſati*,	℔ *iij.*	℞. Oyl of Roſes,	℔ iii.
Ceræ Albæ,	℥ *ix.*	White Wax,	℥ ix.
Ceruſſæ Venetæ,	℔ *j.*	Venetian-Ceruſe,	℔ j.
Camphoræ,	℥ *j* ß.	Camphire,	℥ j ß.

Make

Make choice of very white Venetian Ceruſe, weighty and brittle, and pulverize it, by rubbing it upon the bottom of a Hair-ſieve reverſt, receiving the Powder upon a paper underneath: then putting the Powder into an Earthen-Pipkin, large enough, waſh it ſeveral times in clean water often chang'd, ſtirring the Powder with a wooden-Spatula, and pouring out the water by inclination, when the Powder is ſettled at the bottom.

When the water grows inſipid, waſh the Ceruſe at laſt with Roſe-water, leaving it in the water for five or ſix hours; at the end whereof, pour it out by inclination, and dry the Ceruſe in the ſhade upon a paper: Then put the Wax broken, and the Oyl, into a glaz'd Earthen-pot, and ſet the Pot in a boiling-Bath. When the Wax is melted, take the Pot from the fire, and ſtir the diſſolution with a wooden-Peſtle, till it begins to thick'n, at which time mix the Ceruſe in Powder, ſtirring the Oyntment till it be almoſt cold. Melt the Camphire in a ſmall portion of the Oyl, and incorporate it with the Oyntment when it is cold.

You may alſo, if it be deſired, at the ſame time add the Whites of Eggs, being careful to ſtir the Oyntment, to make an exact mixture of the Ingredients.

This Oyntment is in all Diſpenſatories, but the quantity of the Medicaments is very different, not only in reference to the proportion of the Oyl with the Wax, but alſo for that of the Ceruſe. As to the proportion of the firſt, I find it conformable to the general Rules of Oyntments; but that of the Ceruſe cannot paſs for other then irregular, though I yield to it here, as well for that the quantity is not over-large, as becauſe it is that which chiefly gives its colour and principal vertue to the Oyntment.

Nor can I agree with them, who inſtead of waſhing the Ceruſe with water, boil it with Vinegar diſtill'd, and having dry'd it, make uſe of it in this Oyntment: For I know that Vinegar diſtill'd will open it, and reduce it to an Acid-ſugar-like, white, Chryſtalline ſubſtance, in appearance like Salt; and that alſo by long digeſtions, ſeparations, and ſuperfuſions of the Vinegar diſtill'd, you may reduce all the Ceruſe into a kind of Salt. But this Salt is not a true Salt of Ceruſe, but rather a Salt of Vinegar, incorporated with the Ceruſe which it has diſſolv'd: And beſides that, this Vinegar diſtill'd being conſum'd among the Ceruſe, cannot make any ſeparation of its parts, as being confus'd with the total of the Ceruſe at the time it is dry'd: Certain it is, the Ceruſe is ſo far from being the more cooling, that it fails not to retain great impreſſions of the Acrimony of the Vinegar: which induces me to prefer the Lotion of Ceruſe, before the boiling it in Vinegar diſtill'd, as ſome of our Moderns have directed. For though the addition of Vinegar diſtill'd might take place, were this Oyntment prepar'd for the cure of Ulcers proceeding from a ſalt, burning choler, or ſome fix'd or volatile ſalt, in hopes that the Acid of the Vinegar might dulcifie thoſe ſalt ſubſtances by joyning ſtrictly with them; yet we muſt not look for ſuch an effect from Ceruſe boil'd with Vinegar, after the Flegm and the Acid of the Vinegar are diſſipated, becauſe that in their room there remains only in the Ceruſe the fix'd ſalt, and corroſive of the Vinegar: whereas I have great reaſon to believe, that the Ceruſe, being freed by Lotions from all the Acrimony of the Acids which had reduc'd it into a Calx, and from all the ill impreſſions of the fire which it might have contracted, is very fit to ſuck up and mortifie the choleric and ſalt humours, as alſo the Acids which may have caus'd the Ulcers. However this hinders not, but that when the nature of the humour which cauſes the Ulcers is underſtood, we may have recourſe to Specifics, and uſe them either apart, or mix'd with this Oyntment, as occaſion and judgment require.

As to what ſome object, that the Lotion of the Ceruſe may carry off ſome part of the Sugar-like ſalt diſſolv'd by the Vinegar, when the Lead was reduc'd into Ceruſe; I ſay, that can only be ſome very little part of the Ceruſe fix'd to ſome remainder of the Salt of Vinegar, the loſs whereof cannot but prove advantagious, by reaſon of the acrimonious parts joyn'd with it. I alſo affirm, that Ceruſe coming out of Calcination, is not a ſubſtance diſſolveable in water; nor is there any fear, that either the common, or Roſe-water, ſhould deprive it of any part of its proper ſubſtance, in regard it can only be diſſolv'd by Vinegar, or by ſome other corroſive; and that it is only by their means that it takes the Figure of Salt, or of Vitriol of Ceruſe, which is meerly a diſſolution, mixture and corporification of its ſubſtance with the corroſive Spirits, ſince the Lead may be ſeparated from the ſame Salt, and the ſame Lead be again reduc'd into Ceruſe, and thus metamorphos'd as often as you pleaſe.

As for the Whites of Eggs preſcrib'd in ſeveral Receipts of this Oyntment, I think they may be better mix'd when there is any occaſion; and that it is better to let them alone

alone in the preparation of this oyntment, which is to be kept for ſome time, but will be putrifi'd by the Whites of Eggs. It may not be amiſs alſo, to prepare this oyntment without Camphire, and to mix it only upon occaſion, by reaſon of the averſion which ſome have againſt the ill ſcent.

This oyntment is good to cure Eriſypela's, Burns, Scurfs, and the moſt part of deformities of the Skin, which proceed from ſalt flegm, or burning Choler. It is alſo very proper to allay the Itch, and hot intemperature of Ulcers: it dries up galling and peelings of the skin, the redneſſes which happen to Children, upon their Thighs, and in other places: It is alſo good for bruiſes, and to conſolidate ſlight wounds; for it cools, cloſes, dries, and manifeſtly cicatrizes where it is apply'd.

Unguentum Populeum.

℞. *Gemmarum Populi nigræ contuſarum*, ℔ *i* ß.
Axungiæ Porci maſculi, ℔ *iiij.*

Oyl of Popler.

℞. Buds of black Popler bruis'd, ℔ i. ß.
Barrow's-greaſe, ℔ iiij.

Gather the Popler-buds when they begin to open, and ſhew the points of their leaves; bruiſe them well in a Marble-Mortar, then melt the greaſe over a gentle fire in a glaz'd Earthen-pot large enough, and mingle the Buds with it; ſtop the Pot cloſe, and put it in a Cellar, or cool place, till the Months of *May* or *June*, that all the Herbs are fit to be boil'd; then ſet the Pot in a boiling Bath, and mix therewith

Foliorum contuſorum Violariæ,	Bruis'd Leaves of March-Violets,
Umbilici Veneris,	Kidney-Wort,
Rubi,	Bramble,
Papaveris nigri,	Black Poppy,
Mandragoræ,	Mandrake,
Hyoſcyami,	Henbane,
Solani,	Night-ſhade,
Lactucæ,	Lettice,
Sempervivi majoris, & minoris, &	Greater and leſſer Houſleek,
Bardanæ majoris, an. ℥ *iiij.*	Greater Burdock, *an.* ℥ iiij.

Let them boil with the ſame heat, ſtirring them from time to time, and covering the Pot again, till the moiſture of the Herbs be almoſt conſum'd; then take the Pot from the Bath, ſtrain and preſs out the Ingredients with a good ſtrength, and when the liquor is cool, ſeparate the Oyl from the Feces, and keep it cloſe ſtopt.

Some expoſe the firſt Infuſion of the Popler to the Sun; but a cool place ſeems more proper for an oyntment which is requir'd to cool, conſidering that there is no more intended then to preſerve the vertue of the Poplers, till the other Herbs can be provided, the Night-ſhade being a late Herb.

Some there are that add Wine to the Oyntment while it is boiling, others Juice of Night-ſhade, and Roſe-water: But if you are careful to get all the Herbs ready at a time, and to have them freſh, they will afford moiſture ſufficient to boil the oyntment, and there will be time enough to charge it ſufficiently with the colour and vertue of the Simples. Others would have the Herbs to lye in Maceration eight or ten days, before the oyntment be boil'd. But that would be time ſpent in vain, becauſe that freſh Herbs well bruis'd, impart their vertue ſufficiently, during the time of their boiling, without any neceſſity of Maceration before-hand, either upon, or off the fire; and for that the Roſiny part of the Popler-buds diſſolving eaſily in the oyntment, impart their whole vertue at the ſame boiling.

As to the Opinion of ſome, that all the Ingredients of this Oyntment are cold, it cannot be ſo thought, in regard that the taſte and Aromatic ſmell of the Popler-buds, and their roſinous and combuſtible part demonſtrate them to be hot, as well as the Burdock. However, that hinders not this oyntment from being properly numbred among the cold oyntments, ſince the hot Plants hinder not the cooling vertue of the principal Ingredients, but rather aſſiſt their penetration: Conſidering that Remedies which are accompted purely cold, being us'd alone, produce not thoſe good effects as when mix'd with ſome hot Medicine, though but in a ſmall quantity. We obſerve alſo, that very hot Remedies are ſometimes ſuccesfully made uſe of for the cure of Burns;

as Spirit of Wine, and Juice of Onyons, inſtead of this Oyntment, which is ſo highly approv'd for that intent.

Oyl of Poplar alone, or mix'd with Oyl of Roſes, apply'd upon the Forehead and Temples, provokes ſleep gently, aſſwages the pains of the Head in Fevers, and tempers the heat of them, being laid to the Wriſts, or to the ſoles of the feet. It is us'd to abate the Inflammations of the Reins, and to cure Burns, Eryſipela's, and all ſorts of heats, and to diſcuſs the Milk in the Breaſts; to which purpoſe it is mix'd with Honey, yellow Wax, and many other Medicaments.

Unguentum Pompholygos.

℞. *Olei Roſati,* ℥ *xx.*
Succi Granorum viridium Solani, ℥ *viij.*

Oyntment of the Soyl of Braſs-Oar.

℞. Oyl of Roſes, ℥ xx.
Juice of the green Berries of Night-ſhade, ℥ viij.

Bruiſe the Nightſhade-Berries in a Marble-Mortar, preſs out the Juice, and put the quantity preſcrib'd, with the Oyl of Roſes, into a glaz'd Earthen-pot; cover the Pot, and boil them together till the Juice be almoſt wholly conſum'd; ſeparate the Oyl, throw away the Feces,

Deinde in oleo liqua

Ceræ Albæ, ℥ *v.*

Then Melt in the Oyl

White Wax, ℥ v.

After that, take the pot from the fire, ſtir the oyntment with a wooden-Peſtle till it begins to thick'n; and when it is well cold,

Refrigeratis permiſce

Ceruſæ lotæ pulveratæ, ℥ *iiij.*
Plumbi leviter uſti & pulverati,

Pompholigis vel Tuthiæ Alexandrinæ præparatæ, an. ℥ *ij.*
Thuris ſubtiliter pulverat. ℥ *j.*

Mix therewith

Ceruſe waſh'd and powder'd, ℥ iiij.
Lead ſlightly burnt and reduc'd into Powder,
Soyl of Braſs-Oar, or Tutia of *Alexandria* prepar'd, *an.* ℥ ij.
Frankincenſe finely pulveriz'd. ℥ j.

Stir the Oyntment till it be quite cold, and then put it up.

The Receipt of this Oyntment agrees in moſt Authors as to the number and names of the Ingredients, but the doſes are very various. But this Receipt is regular in all things, and you cannot fail of a right preparation, obſerving this method.

As to the preparation of the Lead, take a large Iron Ladle, and melt in it about a pound of Lead, ſtirring it from time to time with a long Iron Spatula, till it be reduc'd into a greyiſh Powder, which you muſt ſift through a Silk-ſieve, till you have the quantity preſcrib'd.

Pompholix is a white light Powder that ſticks about the tops of the Furnaces where they melt and refine Copper, like Flower of Meal, and ſometimes in little Poulſes, or Bliſters. They call it alſo *Nil*, and *Nihili*. Tutia comes from the ſame Copper, and at the ſame time as Pompholix: But the weight of it cauſes it to ſtick about the lower part of the Furnaces, where it gathers together about the thickneſs of a half Crown, like grains at the top, and of a dark Aſh-colour. 'Tis thought that the vertues of Tutia and Pompholix are very much alike, as both ariſing from Copper, but the true Pompholix is certainly to be preferr'd by reaſon of its lightneſs. The *Greeks* call *Tutia* by the name of *Spodium*, which the *Arabians* have given to the Roots of Reeds burnt, and ſome of our Moderns to burnt Ivory.

To prepare Tutia right, it muſt be heated red hot in a Crucible, and quench'd as often in Roſe-water, after which grind it upon Porphyry, till it be ſcarce to be felt.

Oyntment of Pompholix cools and extinguiſhes the heat of Ulcers, tames their malignity, appeaſes their pain, cleanſes and heals them all together, eſpecially thoſe of the Legs.

Unguentum

Unguentum Ophthalmicum.	*An Oyntment for the Eyes.*
℞. *Butyri recentiſſimi,* ℥ *xvj.*	℞. Neweſt Butter, ℥ xvj.

Melt it in a Copper or Latten Frying-pan over a very ſoft fire, till the Butter ceaſes to ſpatter; then by degrees, and at ſeveral times, mingle with the Butter

Aceti Roſati acerrimi, ℥ *iiij.*	Sharpeſt Vinegar of Roſes, ℥ iiij.

Boil them again over the ſame fire till the Butter ceaſe to ſpatter; pour the whole into a Braſs-Mortar, and

	Mingle with it
Tutiæ Alexandrinæ *ter in Aqua Roſarum extinctæ & præparatæ,* ℥ *iiij.*	Tutia of *Alexandria* thrice quench'd in Roſe-water, and prepar'd, ℥ iiij.

Stir the whole continually, till the Oyntment be cold.

The reaſon why you muſt pour the Vinegar upon the Butter by degrees, and when it ceaſes to ſpatter, is becauſe that if you ſhould pour it too haſtily upon the Butter, it would cauſe ſo great an Ebullition, that the Butter would run over, and be loſt; which it will not do, if you obſerve theſe Directions.

They who conſider, that in making Butter for ordinary uſe, there is no way ſo to ſeparate the ſerous and Cheeſie part, but that ſome portion will remain in the Butter, which will be offenſive in oyntments prepar'd for the eyes, will not wonder that the Butter ſhould be thus prepar'd, to conſume the ſerous part by boiling the Butter, and ſtopping the Cheeſie part in the Strainer, which could not be done by Lotions, or any other way. Beſides, the oyntment prepar'd with Butter thus boil'd, will keep a long time, and is leſs ſubject to ſmell with age.

As for the addition of Vinegar, and boiling the Butter in a Copper or Latten Frying-pan, there is no fear that the oyntment ſhould thereby receive any offenſive quality. For beſides that after the moiſture of the Vinegar is conſum'd, the Earthy part remaining in the Strainer with the Cheeſie part of the Butter, the oyntment receives a vertue very proper to ſtrengthen the Eyes, it becomes fit to cleanſe, by means of the particles of Copper or Latten with which the Butter is impregnated by means of the Vinegar which diſſolves them, and of which there is no danger, ſince the Tutia, which is the foundation of the oyntment, is a production from Copper, and Verdigreaſe, which is the ruſt of Copper, are ſuccesfully made uſe of in infirmities of the Eyes; as alſo Vitriol, whoſe natural Corroſion is augmented by the particles of Copper, with which it is impregnated in the bowels of the Earth: Upon which this obſervation is to be made, that although the Eyes are very ſenſible and tender parts of the body, yet they eaſily endure thoſe things which neither the Stomach nor the Tongue can bear, ſuch as are divers Remedies drawn from ſeveral Minerals, and ſeveral parts of Plants and Animals, when they cannot endure oyl which we daily make uſe of in Diet.

We find in ſeveral Authors deſcriptions of Ophthalmic oyntments, and ſeveral perſons have ſeveral particular Receipts which I cannot find fault with: But I can aſſure them of the Excellency of this oyntment, by the long Experience I have had of it, and the daily tryals which I make of it. It is a wonderful Remedy to allay the Inflammations, to appeaſe the pains and itching of the Eyes, and to cleanſe and cicatrize the Puſtula's of the Eyes and Eye-brows. It is highly approv'd to dry up blear Eyes, eſpecially in old people, and to ſtop and dry up defluxions that cauſe blearneſs, and to prevent the Eye-brows from ſticking one to another. The Patient going to bed, is to put into the corner of the Eyes about the quantity of a little Pea, and at the ſame time to ſhut his Eyes till the oyntment be fully melted. At firſt it will cauſe a ſmarting in the Eyes, but it will preſently be gone. Tryal will certainly confirm what I ſay to be true.

Unguentum Nutritum.

℞. *Lithargyri Auri ſubtiliter pulverat.* ℔ ß.
Aceti fortis, ℥ *viij.*
Olei communis, ℔ *j* ß.

The Nouriſh'd Oyntment.

℞. Litharge of Gold finely powder'd, ℔ ß.
Strong Vinegar, ℥ viij.
Common Oyl, ℔ j ß.

Having pulveriz'd the Litharge, ſtir it a long time in a large Braſs-Mortar, with as much Oyl as will ſerve to moiſten it moderately; and when they are well incorporated, add a little Vinegar, and continue ſtirring till the Vinegar appear no more; then put in more oyl, ſtill ſtirring the oyntment: and ſo continue to add, firſt Vinegar, then Oyl, by little and little ſucceſſively, till the Litharge have ſuck'd up the preſcrib'd quantity of both, and that both have acquir'd the due conſiſtence of an oyntment: and in regard the Oyl exceeds the Vinegar, put in every time more Oyl then Vinegar. Due patience, and continual ſtirring, will not only bring it to a due conſiſtence, but to a whiteneſs like that of Ceruſe-Oyntment.

Nouriſh'd Oyntment is alſo call'd *Crudum*, or *Raw*, becauſe it is not boil'd; and *Oyntment of Litharge*, becauſe Litharge is the Foundation; and *Triapharmacum*, or a Medicine of Three, becauſe it is compounded of three Ingredients.

As for thoſe that chuſe to prepare and ſtir this Oyntment in a Leaden-Mortar, pretending to augment its vertue, I think they rather do ill then well; ſince Litharge being only Lead Metamorphos'd, mixing with the oyntment, affords it that vertue which is to be expected from Lead abundantly enough, without ſeeking after an Imaginary Vertue from the touch of the Mortar; beſides that the bad colour which the Lead will give it, may be ſufficient to divert an Artiſt from any ſuch courſe.

They that will make a diſſolution of Litharge in Vinegar, may quickly, and without trouble, get ready an *Unguentum Nutritum* of a good conſiſtence, and at leaſt as effectual as that which I have ſet down, by incorporating cold the diſſolution with an equal quantity of Honey. You may alſo equally diſſolve in Vinegar, Minium, and white Lead, and mix the diſſolutions with the oyl; but theſe oyntments ſoon putrifie, becauſe of the Aquoſity of the Juices: So that they are never prepar'd, but upon occaſion.

Nouriſh'd Oyntment is good to mortifie Scabs, Tetters, and other Infirmities of the Skin. It is alſo us'd for the cure of Ulcers, particularly thoſe which are caus'd by ſalt flegm; becauſe that the Litharge joyn'd to the Acid of the Vinegar, fixing upon the ſalt humour, mortifies it, and cicatrizes the Ulcers. This Oyntment cools and dries very much: It may be kept ſeveral Months, if well prepar'd.

Unguentum deſiccativum Rubrum.

A red drying Oyntment.

℞. *Olei communis,* ℔ ij.
Cetæ Albæ, ℔ ß.

℞. Common Oyl, ℔ ij.
White Wax, ℔ ß.

Melt them together over a gentle fire; take them off, and ſtir them together with a wooden-Peſtle till they begin to thicken; and when they are half cold, add the following Powders.

℞. *Lapidis Calaminaris, &*
Boli Armenæ, an. ℥ *iiij.*
Lithargyri Auri, &
Ceruſæ Venetæ, an. ℥ *iij.*
Camphiræ, ℥ *j.*

℞. Calaminaris-Stone, and
Bole-Armoniac, *an.* ℥ iiij.
Litharge of Gold, and
Ceruſe of Venice, *an.* ℥ iij.
Camphire, ℥ j.

Grind the *Lapis Calaminaris* and *Bole-Armoniac* upon a Porphyry, ſift the Ceruſe through a Hair-ſieve revers'd, and pulverize the Litharge very fine, and mix all the Powders with the oyntment, ſtirring it continually till it be quite cold: Then add the Camphire pulveriz'd, with a drop or two of Spirit of Wine, and the Oyntment is made.

This

This Deſiccative Red Oyntment, though much in uſe, is left out however by many Authors; neither have they that mention'd it, obſerv'd the proportion of Quantities: For ſhould we put five ounces of Wax to one of Oyl, as the Ancients direct, the Oyntment would be of too ſolid a conſiſtence; and therefore we have regulated the proportions of the Wax and Oyl as for other Oyntments, putting in but one part of Wax to four parts of Oyl; by which means the Wax and the Oyl will eaſily ſuck up the Powders, notwithſtanding the largeneſs of their quantity, and make this Oyntment far more ſolid then the uſual ſorts of Oyntments.

This Oyntment cools, dries, ſtrengthens and cloſes. It alſo ſtops defluxions that fall upon the parts, and digeſts and conſumes the ſuperfluous moiſture of Wounds and Ulcers which it cicatrizes.

Unguentum Stypticum.

℞. *Olei communis*, ℔ *iiij.*
Myrtillorum ſiccorum contuſorum, ℔ *i* ß.
Aluminis Rupei. ℔ ß.
Succi Myrtillorum, &
Sorborum immaturorum, an. ℔ *j.*

The Reſtrictive Oyntment.

℞. Common Oyl, ℔ iiij.
Whortle-berries dry'd, ℔ i ß.
Roch-Alum, ℔ ß.
Juice of Whortle-berries, and
Green-Services, *an.* ℔ j.

Put the Whortle-berries into a large Earthen glaz'd pot, and pour in the oyl preſcrib'd: then put the Alum diſſolv'd in the Juices, together with the Juices; and having cover'd the Pot, ſet it in a boiling-Bath till the moiſture be almoſt quite conſum'd: then ſtrain, and ſtrongly preſs out the whole; and having ſeparated the Oyl from the Feces,

℞. *Olei illius*, ℔ *iij.*
Ceræ Albæ, ℥ *ix.*

℞. Of that ſame Oyl, ℔ iij.
White Wax, ℥ ix.

Melt the Wax in the ſame Pot in the ſame Bath: Then take off the Pot, ſtir the oyntment with a wood'n-peſtle; and when it begins to thick'n, and grow half cold,

℞. *Nucum Cupreſſi*,
Myrtillorum,
Balauſtiorum,
Corticum Granatorum, &
Glandium,
Acinorum Uvæ,
Oſſis e crure bovis calcinati,
Granorum Sumach,
Maſtiches,
Acaciæ,
Aluminis uſti, &
Corticis mediani Caſtanearum, an. ℥ *vj.*

℞. Cypreſs-Nuts,
Whortle-berries,
Pomgranate-flowers,
Rinds of Granates, and
Acorns,
Grape-ſtones,
Bone of an Oxes Thigh calcin'd,
Grains of Sumach,
Maſtich,
Acacia,
Burnt-Alum, and
Middle-rind of Cheſtnuts, *an.* ℥ vj.

Calcine the Oxe-bone in an ordinary fire, burn the Alum over a gentle fire till it be perfectly dry; then beat them together in a great Braſs-Mortar, with the reſt of the Ingredients, except the Maſtich, which muſt be beaten apart; and having ſifted the Powders thus prepar'd, mix them with the oyntment, ſtirring it till it be perfectly cold.

You ſhall meet with, in certain Authors, certain Deſcriptions of this Stiptic Oyntment, as alſo of an Oyntment call'd the *Counteſſes Oyntment*, very much eſteem'd in practice. But if you examine all the Receipts, you ſhall find ſeveral miſtakes that deſerve to be reform'd, and acknowledge that it was not done amiſs, to produce a better, and more Methodical. The Aſtriction which the Ancients would give to the oyl, by waſhing it with Alum-water, cannot be very great, ſince the principal Aſtriction of the Alum lies in its terreſtrerity, which never aſcends in Diſtillation; and that the water drawn by that means alone, or in Diſtillation, is nothing but a flegm, which contains very little Spirit, and has no Aſtriction, neither in appearance, nor real. You ſhall alſo find, that the Aſtriction of Alum cannot be imparted to the oyntment, but by the terreſtrial

terreſtrial part; and that the choice, quantity, and uſe which is here made of the Alum, as of all the other Ingredients, are undeniably more regular, then any thing that is to be met with in the Diſpenſatories, in reference to this oyntment.

The terreſtrial and aſtringent part of the Oxe's Thigh-bone being only neceſſary for this oyntment, the diſſipation of the flegm, ſpirit, ſalt, and volatile oyls is not regarded, no more then the conſumption of the watry and ſpiritous parts of the Alum, ſince there is no need of the terreſtrial.

They who have this oyntment well prepar'd, need take no care for the Counteſſes oyntment, the preparation whereof is troubleſome, and the vertues much inferiour.

The Styptic oyntment apply'd to the Reins, ſtrengthens them, as alſo the Ligaments of the Matrix, the deſcent whereof it hinders, and prevents abortion, anointing the entrance thereof, and the lower part of the Belly. It is alſo ſuccesfully us'd to cloſe the Neck of the Matrix after lying in, and to conſolidate ſuch tearings of the parts as happen ſometimes after difficult Labour. It is alſo very proper againſt the Relaxation of the ſtreight Gut, apply'd without, and put into the Fundament, and to ſtop unreaſonable loſſes of blood in Women, apply'd to the Region of the Reins, the Liver, and all the Belly: It is alſo laid upon the Stomach to ſtay vomiting. This oyntment cauſes no heat at all, and may ſerve in word upon all occaſions where there is need of cloſing and conſolidation.

Unguentum Pomatum Officinale.		*A Pomatum-Oyntment for the Shops.*	
℞. *Radicum Ireos Florentiæ,*	℥ *iij.*	℞. Roots of Florence-Orrice,	℥ iij.
Santali Citrini, &		Yellow Sanders, and	
Benjonii, an.	℥ *j.*	Benjamin, *an.*	℥ j.
Reſinæ Styracis,	℥ *iij.*	Roſin of Storax,	℥ iij.
Ligni Rhodii, &		Lignum-Rhodium, and	
Florum Lavendulæ, an.	℥ *j.*	Flowers of Lavender, *an.*	℥ j.
Acori Veri, &		True Acorus, and	
Caryophyllorum, an.	℥ ß.	Cloves, *an.*	℥ ß.

Beat them all in a great Braſs-Mortar, ſift them through a coarſe Hair-ſieve, and put them into a fine little Linnen-bag, yet big enough for the Ingredients to lye looſe in it.

℞. *Axungiæ Porci maris purgatæ & lotæ,*	℔ *iij.*	℞. Barrow's-greaſe cleans'd and waſh'd,	℔ iij.
Sævi Hoedini recentis,	℔ *j.*	New Kids Tallow,	℔ j.
Poma recentia cortice, & parte interiore liberata & in partes ſecta,	*N° xij.*	New Pippins par'd, cor'd, and cut into pieces,	N° xij.
Aquæ Roſarum,	℔ ß.	Roſe-water, and	℔ ß.
Florum Aurantiorum,	℥ *iiij.*	Orange-flower-water,	℥ iiij.

Put all theſe together, with the Sack of Aromatics, into a narrow-mouth'd glaz'd Earthen-veſſel cloſe cover'd; ſet the Pot in a boiling Bath, till the moiſture be almoſt all conſum'd: Then ſtrain and preſs the whole with a moderate ſtrength; let the Pomatum cool, and having ſeparated it from the Feces, keep it in a Galley-pot cloſe ſtopt in a cool place.

The Ingredients of this Pomatum are ſo proportion'd, that the odour may be pleaſant, the colour white, and the conſiſtence proper. And though the moſt part of Apothecaries have ſome particular Receipts, I believe there are not many who will reject this.

This Pomatum is chiefly us'd for ſuch Deformities as happen to the Noſe, and for chaps of the Lips, Breaſts, Feet, Hands, and other parts of the Body. It ſerves alſo to ſoften and moiſten the over-drineſs of the Skin.

You may alſo make a red Pomatum for the Lips, according to the following Receipt.

Melt in a Silver, or white Earthen-pot, in a hot Mary's Bath, an ounce of white Wax bruis'd, as much Oxe-Marrow, and three ounces of the firſt Pomatum; and having added a dram of the rind of the root of Alkanet, ſprinkl'd before with a little good

good Spirit of Wine, keep the Veſſel in the ſame Bath, ſtirring the Pomatum from time to time, till it look very red; then ſtrain it through a fine Linnen Cloth, and put up the Pomatum. You may alſo prepare a Pomatum of Oyl of Eggs in the ſame manner.

Melt in *Balneo Mariæ*, in a white Earthen-veſſel, an ounce of white Wax, as much Sperma-Cete, with four ounces of Oyl of Eggs very pure, chuſing the beginning of *May* for this Operation; and having cover'd the Veſſel with a white Linnen cloth ſomewhat cloſe ſpun, expoſe it to the open Air for ſeveral Months, and till the Pomatum be perfectly white. This Pomatum is very proper to preſerve the beauty of the Complexion, to take away ſcars of the Face, and fill up the holes of the Small-pox, eſpecially if you waſh your face with Frog-ſpawn water, with never ſo little Borax diſſolv'd in it, and if you waſh the part once a day with Spirit of Wine. It is alſo very effectual to cure chops in the Lips, Breaſts, and Fundament, eſpecially if you add to it a little diſtill'd Oyl of Wax.

Unguentum Martiatum.

℞. *Radicum Altheæ, &*
Enulæ Campanæ,
Seminis Fænugreci, &
Cumini, an. ℥ *iiij.*
Nardi Indicæ, ℥ *ij.*
Foliorum Roriſmarini,
Lauri,
Rutæ,
Marjoranæ,
Ebuli,
Sabinæ,
Menthæ hortenſis, &
Aquaticæ,
Mentaſtri,
Baſilici,
Salviæ,
Primulæ veris,
Polii Montani,
Calaminthæ,
Artemiſiæ,
Abſinthii majoris,
Origani,
Betonicæ,
Brancæ Urſinæ,
Herbæ venti,
Coſti Hortenſis,
Sambuci,
Millefolii,
Chamædryos,
Hyperici,
Centaurii minoris,
Tetrahit,
Cardui Benedicti,
Abrotani Maris &
Feminæ,
Caprifolii,
Yvæ Moſchatæ,
Florum Stœchados Arabicæ,
Chamæmili,
Buphthalmi, an. *M. j.*

The Martiate Oyntment.

℞. Roots of Althea, and
Elecampane,
Seeds of Fengreek, and
Cumin, *an.* ℥ iiij.
Indian-Nard, ℥ ij.
Leaves of Roſemary,
Laurel,
Rue,
Marjoram,
Danewort,
Savine,
Garden-mints, and
Water-mint,
Wild-mint,
Baſil,
Sage,
Primroſes,
Mountain-Poley,
Calamint,
Mugwort,
Greater Wormwood,
Organy,
Betony,
Brank Urſine,
Black French Horehound,
Coſt-Mary,
Elder,
Mill-foil,
Germander,
S. *John*'s Wort,
Leſſer Centaury,
Jews Iron-wort,
Bleſſed Thiſtle,
Southernwood Male and
Female,
Woodbine,
Sea-Ground-pine,
Flowers of Arabian Caſſidony,
Camomile,
Oxe-eye, *an.* M. j.

Bruiſe them all, and put them into a narrow-mouth'd glaz'd Earthen-Veſſel, and having pour'd upon them ſixteen pints of Common Oyl, ſtop the Veſſel cloſe, and ſet it to macerate upon the hot Cinders for 24 hours. Then increaſe the fire, and boil the

Ingredients

Ingredients, gently ſtirring them from time to time with a wooden Spatula, till the moiſture be almoſt all conſum'd; afterward ſtrain and preſs the whole ſtrongly out, and having ſeparated the Oyl from the Feces

℞. *Ceræ flavæ,*	℔ *v.*	℞. Yellow Wax,	℔ v.
Butyri Mayalis,		May-Butter,	
Axungiæ Urſi, &		Bears-greaſe, and	
Gallinæ,		Hens-greaſe,	
Medullæ Cervinæ, &		Deers Marrow, and	
Terebinthinæ Venetæ, an.	℥ *viij.*	Venice-Turpentine, *an.*	℥ viij.

Melt the Wax firſt in little pieces, then add the Butter, the Greaſes, the Marrow, and Turpentine; and when the Oyntment is half cold,

℞. *Styracis Liquidæ,*	℥ *iiij.*	℞. Liquid Storax,	℥ iiij.
Myrrhæ,		Myrrh,	
Olibani, &		Olybanum, and	
Maſtiches pulveratorum, an.	℥ *ij.*	Maſtic in Powder, *an.*	℥ ij.

Mix them with the reſt, and ſtir the Oyntment till it be cold.

The Receipt of this Oyntment in the Diſpenſatories is much alike. But if you examine them well, you will find that with great reaſon ſeveral Simples either of a cold or temperate quality are omitted, that rather hinder the good effects of the hot, then communicate any vertue to the Oyntment; and that thoſe which are introduc'd in their ſtead, deſerve to take their place.

Unguentum Martiatum is highly commended, and ſuccesfully us'd in all cold diſeaſes of the Head, the Stomach, the Liver, and all the other Bowels, and of all the parts of the Body, particularly againſt Convulſions, and Relaxations of the Nerves, the Sciatica, and all ſorts of Gouts, and Rhumatiſmes that proceed from cold cauſes: It ſoftens and diſſolves hardneſſes, eſpecially of the Liver and Spleen, the Nerves and Joynts, and appeaſes their pains. It is highly commended in Dropſies and Tympanies, the Belly being anointed therewith. It is made uſe of ſometimes alone, ſometimes mix'd with Spirit of Wine, Oyls, and other Oyntments; and alſo with Treacle, to anoint ſuch parts of the Body as have need thereof.

Unguentum de Althæa.

R. *Radicum Althææ recentium & minutim inciſarum,* ℥ *vj.*
Seminum integrorum Lini, & Fenugræci,
Laminarum ſcillæ minutim inciſarum, an. ℥ *iiij.*
Aquæ Fontanæ, ℔ *viij.*

Oyntment of Marſh-Mallows.

℞. Roots of Marſh-Mallows freſh, and cut ſmall, ℥ vj.
Whole ſeeds of Line, and Fenugreek,
Slices of Squills cut very ſmall, *an.* ℥ iiij.
Fountain-water, ℔ viij.

Put them together into a Copper-tinn'd-veſſel, and pour upon them eight pints of common water; let them macerate over a very ſoft fire for 24 hours, ſtirring them from time to time with a wood'n Spatula; then let them boil gently, ſtirring them often, till the Muſcilages are ſufficiently thick; and having ſtrain'd and preſs'd them through a ſtrong cloſe woven Cloth, mix with the preſs'd Muſcilage eight pints of common oyl; then boil them again over a gentle fire, till the ſuperfluous moiſture of the Muſcilages be conſum'd: and having ſtrain'd them again,

℞. *Ceræ flavæ,*	℔ *j.*	℞. Yellow Wax,	℔ j.
Colophoniæ, &		Colophony, and	
Reſinæ, an.	℔ ß.	Roſin, *an.*	℔ ß.

Cut them in little pieces, and melt them, and if you obſerve any Feces at the bottom of the Veſſel, ſtrain them again, or at leaſt ſeparate by Inclination the clear from the impure, while the ſubſtances are very hot; then ſtir the Oyntment, and when it grows thick,

℞. *Terebinthinæ*

℞. *Terebinthinæ Venetæ,*		℞. Venice-Turpentine,	
Galbani puri,		Pure Galbanum,	
Gummi Hederæ pulveratæ, an.	ʒ ij.	Gum of Ivy powder'd *an.*	ʒ ij.

Incorporate them together, and mix them with the reſt, ſtirring the oyntment till it be quite cold.

The preparation of the Muſcilages neceſſary for this oyntment, has been a ſtumbling-block to many Authors, the moſt part of which have preſcrib'd exceſſive quantities of Simples, from whence to extract the Muſcilages, pretending to extract them with a very ſmall quantity of water. Some fearing to miſtake, have altogether omitted the quantities, as well of the roots, as of the water, preſcribing only a certain quantity of Muſcilages. Others ignorant of theſe kinds of preparations, direct the ſame Simples to be well bruis'd, believing erroniouſly, that there is no other way to extract Muſcilages. But laying aſide theſe different preparations, I believe an Artiſt may find here ſufficient ſatisfaction, as well for the quantities of the Simples neceſſary for the Muſcilages, as for the quantity of the water, and the method of preparation.

Oyntment of Marſh-Mallows, moiſtens, ſoftens, and gently heats: It is proper to expel wind, and cauſe a tranſpiration of the ſeroſities that fall between the Muſcles of the Breaſt. It aſſwages pain in the ſides, ſoftens the hardneſs of the Bowels and Nerves, and the Tumours that happen to the parts of the body, particularly the *Parotides*, or ſwellings under the Ears, and about the Neck; it is us'd alone, and ſometimes mix'd with other Oyntments, Oyls and Cataplaſmes.

Unguentum Baſilicum.		*Baſilicon Oyntment.*	
℞. *Ceræ flavæ,*		℞. Yellow Wax,	
Sevi Arietini,		Rams Tallow,	
Reſinæ,		Roſin,	
Picis Navalis, &		Ship-Pitch, and	
Terebinthinæ Venetæ, an.	℔ j.	Venice-Turpentine, *an.*	℔ j.
Olei communis,	℔ v.	Common Oyl,	℔ v.

Cut the yellow Wax, the Tallow, the Roſin, and black Pitch into little pieces, and melt them together in the Oyl, in a Copper Baſon, over a gentle fire; then ſtrain them through a coarſe piece of Linnen, and incorporate the Turpentine with the ſtraining, and the Oyntment is made.

Some Authors have preſcrib'd not above half the quantity of the Oyl, not conſidering that ſo ſmall a quantity cannot ſuffice to give a total conſiſtency to the Oyntment, whereby it would prove ſo ſolid, as not eaſily to be got out of the Pot. Others leave it to the judgment of the Artiſt to proportion the quantity; but it was better to regulate the proportion for young beginners for the preparation of an oyntment, as much or more in uſe then any other.

The Name of *Baſilicon*, or *Royal*, is given to this oyntment, as well for the vertues, as the frequent uſe. It is alſo call'd *Suppurative*, becauſe it digeſts and haſtens Suppuration. It operates very gently, and aſſwages the pains that are felt while the matter is ripening; it cicatrizes alſo wounds when the matter is come forth. It is ſpread alone upon Linnen-folds, and ſometimes mix'd with yolks of Eggs, Turpentine, or other Oyntments, Oyls and Emplaſters.

Unguentum Egyptiacum.		*The Egyptian Oyntment.*	
℞. *Æruginis Æris,*	ʒ x.	℞. Ruſt of Braſs,	ʒ x.
Aceti Acerrimi,	ʒ xiiij.	Strong Vinegar,	ʒ xiiij.
Mellis Optimi,	ʒ xxviij.	The beſt Honey,	ʒ xxviij.

Bruiſe the Ruſt of Braſs, diſſolve it in the Vinegar, paſs it through a Hair-ſieve, and boil them both together with the Honey to the conſiſtence of a ſoft oyntment.

The inconveniences which I ſuffer'd formerly, when, according to the method of the Ancients and Moderns, I was wont to beat the Verdigreaſe dry'd, the ſmall duſt

whereof getting into my Eyes and Noſtrils, caus'd a moſt inſupportable Corroſion. Theſe inconveniences, I ſay, caus'd me to ſeek out ſome way to avoid them: Thereupon, finding it ſo eaſie to incorporate Verdigreaſe with Vinegar and Honey, I thought I might as well diſſolve the Verdigreaſe in Vinegar, or at leaſt ſteep it in ſuch manner, that it might paſs through the Hair-ſieve with the Vinegar, and leave upon the Sieve the little pieces of Copper and Feces of the Grapes that us'd to be mix'd with it: which ſucceeded ſo well, that ever ſince I have practis'd that way which I was deſirous to impart to publick view.

For the preparation therefore of this oyntment, take eleven ounces of Verdigreaſe inſtead of the ten ounces here preſcrib'd, to ſupply the waſte of the little pieces of Copper, or the Feces of the Grapes which are uſually mix'd with it. Put them into a Copper Frying-pan, and hold them over a gentle fire, and having very well bruis'd them with a wood'n-peſtle, and ſteep'd them in the Vinegar preſcrib'd, paſs the whole through a Hair-ſieve; and if any of the Verdigreaſe remain in the Sieve, return it into the Pan, bruiſe it, and ſteep it in ſome portion of the ſame Vinegar, and paſs it again through the Sieve, till only ſome uſeleſs pieces of the Copper and Lees of the Grapes remain behind. Then boil the diſſolution with the Honey preſcrib'd over a gentle fire, ſtirring it from time to time till it come to the conſiſtence of a ſoft oyntment, and look of a red colour.

Some ſay, that an Egyptian Phyſician invented this oyntment, and gave it the name; others, that it was call'd *Egyptiacum*, becauſe of its colour. However it were, the principal uſe of it is to conſume rotten fleſh, and ſuperfluities of Ulcers that hinder the growing of the live fleſh: It operates vigorouſly, and with ſome pain: For which reaſon the oyntment of the Apoſtles is made uſe of in its place, when there is no reaſon for any ſuch violent effects. Uſually it is enough to anoint the Tents and Linnen Rolls with this oyntment.

Unguentum Apoſtolorum.

℞. *Ceræ Citrinæ,*	℥ *iiij.*
Reſinæ,	
Terebinthinæ, &	
Ammoniaci, an.	℥ *xiiij.*
Lythargyri Auri,	℥ *ix.*
Olibani,	
Ariſtolochiæ rotundæ,	
Bdellii, an.	℥ *vj.*
Myrrhæ,	
Galbani, an.	℥ ß.
Opopanacis,	
Viridis Æris, an.	℥ *ij.*
Olei communis,	℔ *ij.*

The Apoſtles Oyntment.

℞. Yellow Wax,	℥ iiij.
Roſin,	
Turpentine, and	
Ammoniac, *an.*	℥ xiiij.
Litharge of Gold,	℥ ix.
Olibanum,	
Round Birthwort,	
Bdellium, *an.*	℥ vj.
Myrrh,	
Galbanum, *an.*	℥ ß.
Opoponax,	
Verdigreaſe, *an.*	℥ ij.
Common Oyl,	℔ ij.

Beat the Birthwort-root, as alſo the Litharge, Myrrh, Bdellium, and Verdigreaſe in a large Braſs-Mortar; melt the Opoponax, Galbanum, and Gum-Ammoniac in a Braſs-Mortar heated, and incorporate the Turpentine with them when they are melted. In the mean while, cauſe the Roſin and Wax to be cut into ſmall pieces, and melted with the Oyl: Then take out the mixture of the Gums and Turpentine out of the Mortar while it is hot, and put it into a Copper Frying-Pan; and holding the Pan over a gentle fire, incorporate the Wax and the Roſin, ſtirring the whole with a wood'n-Peſtle till the Ingredients are well united: Then take the Pan from the fire, ſtirring continually till the oyntment begin to thicken; then mix firſt the Verdigreaſe to give the oyntment its green colour, afterwards add the other Powders mix'd together before; and when all the ingredients are well incorporated, and cold, put up the oyntment for uſe. I think there cannot be a better method for this preparation, as well to preſerve the vertue of the Ingredients, as for their well mixing. But if any other Artiſt have found a better way, he may do well to communicate it as frankly as I have done this.

It is call'd *Unguentum Apoſtolorum*, rather from the number of the Medicaments, then for any uſe that the Apoſtles made of it. The Ancient, and moſt part of the Modern Receipts of this oyntment, preſcribe no more Wax then Roſin and Turpentine: Many Authors alſo direct the boiling of the Litharge with ſome part of the Oyl, and almoſt all preſcribe the boiling and diſſolving the Gums with the Vinegar. True it is, that the

the oyntment may be prepar'd without augmenting the weight of the Wax, whether you boil the Litharge in ſome part of the oyl or no, or whether you mix the Gums after you have boil'd and diſſolv'd in the Vinegar; but I think it better to proceed otherwiſe: For the augmentation of the Wax is not to be diſapprov'd, conſidering that if you follow the uſual proportion of oyntments, two pints of oyl require ſix ounces of wax: and it were well preſcrib'd, but that ſome conſideration muſt be alſo had to the Roſin, Gums, and Litharge, and other Powders that give ſome ſubſtance to the oyntment: Nor is there any fear that the augmentation of the wax ſhould, whoſe vertues are ſo well known, diminiſh the vertues of the oyntment.

The Apoſtles Oyntment is very much us'd to cleanſe Wounds and Ulcers, for it conſumes putrefaction and ſuperfluities, and cauſing the ſores to look well, afterwards dries and cicatrizes them.

Unguentum Aureum.

℞. *Olei communis*, ℔ *ii* ß.
Ceræ Citrinæ, ℔ ß.
Terebinthinæ Venetæ, ℥ *ij.*
Reſinæ,
Colophoniæ, *an.* ℥ *i* ß.
Olibani,
Maſtiches, *an.* ℥ *j.*
Croci, ℨ *j.*

The Golden Oyntment.

℞. Common Oyl, ℔ ii ß.
Yellow Wax, ℔ ß.
Venice-Turpentine, ℥ ij.
Roſine,
Colophony, *an.* ℥ i ß.
Olibanum,
Maſtich, *an.* ℥ j.
Croci, ℨ j.

Pulverize apart the Olibanum, Maſtich, and Saffron; and having melted over a gentle fire the Wax, Roſin, and Colophony in the Oyl preſcrib'd, take the Veſſel from the fire, and mix the Turpentine, ſtirring the oyntment gently till it begin to grow thick; at which time mix the Powders, continually ſtirring the oyntment till all the Ingredients are well united.

This Oyntment is thus call'd from its Golden colour, eſpecially if the Roſin, Wax, and Colophony be of a good colour, and pure; and if the Saffron be new.

The uſe of it is chiefly to incarnate and cicatrize Wounds and Ulcers.

Unguentum Mundificativum de Apio.

℞. *Foliorum Apii*, *M iij.*
Hederæ terreſtris,
Abſinthii majoris,
Centaurii minoris,
Chamædryos,
Salviæ,
Hyperici,
Plantaginis,
Milleſolii,
Vincæ pervincæ,
Conſolidæ majoris, &
Mediæ,
Betonicæ,
Caprifolii,
Verbenæ,
Veronicæ,
Galei lutei,
Centinodiæ,
Ophyogloſſi,
Pimpernellæ, *M ij.*
Olei communis, ℔ *viij.*
Picis Albæ,
Sævi Arietini,
Ceræ Citrinæ, &
Terebinthinæ, *an.* ℔ *ij.*

A Cleanſing Oyntment of Parſley.

℞. Leaves of Parſley, M iij.
Ground-Ivy,
Bigger Wormwood,
Leſſer Centaury,
Germander,
Sage,
S. *John*'s Wort,
Plantaine,
Millfoil,
Perwincle,
Bigger Conſound, and
Midling-Conſound,
Betony,
Woodbine,
Vervain,
Speedwell,
Yellow Ladies Bed-ſtraw,
Centinody,
Adders-tongue,
Pimpernel, M ij.
Common Oyl, ℔ viij.
Black Pitch,
Rams Suet,
Yellow Wax, and
Turpentine, *an.* ℔ ij.

Gather the Herbs, if it may be done, all the ſame day, when they are in their full vertue, and bruiſe them in a Marble-Mortar. Melt the Wax, Pitch, and Suet in a Copper-pan tinn'd within, over a gentle fire in the Oyl; put in the bruis'd Herbs, and boil them together gently, ſtirring the ingredients from time to time with a wooden Spatula; and when the moiſture is almoſt all conſum'd, ſtrain and ſtrongly preſs out the whole; when the ſtraining is cold, and ſeparated from the Feces and moiſture,

℞. *Pulveris Myrrhæ Electæ, &*		℞. Powder of Select Myrrh, and	
Aloes Succotrinæ, an.	℥iiij.	Aloes Succotrine, *an.*	℥ iiij.
Ariſtolochiæ Rotundæ, &		Round Birth-wort, and	
Radicis Ireos Florentiæ, an.	℥ ij.	Root of Florence-Orrice, *an.*	℥ ij.

Incorporate all theſe finely powder'd with the whole, and the Oyntment is made.

There are ſeveral Modern Receipts of this Oyntment, but various, both in reſpect of the ingredients, and manner of preparation. But if you examine this, I believe you will find it rightly preſcrib'd in all reſpects, and as rightly and methodically prepar'd.

Some for the preparation of a cleanſing Oyntment, content themſelves to extract the juice of ſome of theſe Plants, and to boil it among the Oyl, and other Medicaments which are apt to melt. But beſides that the juices alone are not able to impart their vertue to the Medicine, unleſs aſſiſted by thoſe other parts of the Herbs from whence they are drawn, we know by experience that they cannot communicate neither to this nor any other oyntment their green colour, unleſs the Herbs be boil'd whole.

This Oyntment is proper to cleanſe all ſorts of Ulcers and Wounds, diſſipate excrementitious ſeroſities, and to prevent them from breeding. It is alſo eſteem'd againſt the biting of Mad-dogs.

Unguentum Mundificativum de Reſina.

A Cleanſing Oyntment of Roſine.

℞. *Olei communis,*	℔ *j.*	℞. Common Oyl,	℔ j.
Reſinæ,		Roſine,	
Terebinthinæ, &		Turpentine, and	
Mellis communis, an.	℔ ß.	Common Honey, *an.*	℔ ß.
Ceræ flavæ,	℥ *iij.*	Yellow Wax,	℥ iij.
Myrrhæ Electæ,		Select Myrrh,	
Sarcocollæ,		Sarcocoll,	
Farinæ Lini, &		Flower of Lineſeed, and	
Fenugraci,		Fengreek,	
Thuris, &		Frankincenſe, and	
Maſtiches, an.	℥ *j.*	Maſtic, *an.*	℥ j.

Cut the Wax into ſmall bits, and melt it in the oyl preſcrib'd over a gentle fire, and having ſeparated the filth, and ſtirr'd the oyntment till it be half cold, add the Honey and Turpentine firſt, then the Flower of Lineſeed and Fengreek, and laſtly the Gums finely powder'd, and incorporate all well together.

This Oyntment was invented, by reaſon of the difficulty to get the Herbs that compound the Mundificative of Parſley, at all times.

This oyntment is as it were a Deputy in the place of the Parſley-oyntment, and is almoſt as much in uſe, and not much inferiour in vertue.

Unguentum *Agrippæ.*

Agrippa's *Oyntment.*

℞. *Radicum Brioniæ,*	℔ *ij.*	℞. Roots of Briony,	℔ ij.
Cucumeris Aſinini,	℔ *j.*	Wild Cucumber,	℔ j.
Scillæ,	℔ *j.*	Squills,	℔ ß.
Ireos,	℥ *iij.*	Orrice,	℥ iij.
Filicis,		Fern,	
Ebuli, &		Danewort, and	
Tribulorum aquaticorum, an.	℥ *ij.*	Water-Caltrops, *an.*	℥ ij.

Having

Having cleans'd, wash'd, and bruis'd the Herbs in a Marble-Mortar, put them into a narrow-mouth'd glaz'd Earthen-pot, and pour the prescrib'd oyl upon them; then cover the Pot, and keep it four and twenty hours upon hot Embers; after that, boil the ingredients gently, stirring them from time to time with a wood'n Spatula, and covering the Pot still when you have done, till the moisture of the Roots be almost consum'd; then having strain'd and press'd the whole strongly forth, and having purify'd the oyl, mix with it

Ceræ Citrinæ,	℥ *xviij.*	Yellow Wax,	℥ xviij.

Then take the Vessel from the fire, and stir the oyntment till it be almost quite cold.

The impossibility that four pints of oyl should retain the vertue of all the Roots here prescrib'd, according to the Ancients, has caus'd an alteration of six pints of oyl, and the weight of the Wax to be augmented.

I have not inserted this oyntment here, though said to be made by King *Agrippa*, who liv'd in the time of S. *Paul*, for the frequent use that is made of it, but for its vertues that recommend it for the cure of the Dropsie, by anointing the Belly with it; and the Splenetic, by anointing the part where the pain lies. It is also good to dissolve hard and knotty swellings that happen to the Nerves, and to appease the pains in the Kidneys. It also loosens the Belly of Children, and tender Persons, apply'd to the Region of the Stomach and Navel.

Unguentum Neapolitanum.

℞. *Axungiæ Suillæ,*	℔ *ij.*		
Argenti vivi,	℔ j.		
Terebinthinæ Venetæ,	℥ *iiij.*		
Axungiæ Viperinæ,			
Olei Laurini, &			
De Spicæ,			
Ceræ Flavæ, &			
Styracis Liquidæ, an.	℥ *iiij.*		

The Neapolitan Oyntment.

℞. Sows-grease,	℔ ij.		
Quick-silver,	℔ j.		
Venice-Turpentine,	℥ iiij.		
Vipers fat,			
Oyls of Laurel, and			
Spike,			
Yellow Wax,			
Liquid Storax, *an.*	℥ iiij.		

Pass the Quick-silver through a piece of Shamoys-leather, and incorporate it with the Turpentine, stirring both together in a large Brass-Mortar for a good while; and when the Turpentine has well devour'd the Quick-silver, add the Liquid Storax, and by degrees the Sows-grease, with the Wax melted in it; then add the Vipers fat, and the Oyls of Laurel and Spike, and after you have stirr'd them a long time, and well incorporated the whole, put up the oyntment for use.

There are several Receipts in several Dispensatories of this oyntment, and under a great many names, with a large number of Ingredients; but we thought fit to take no more then those that are sufficient to produce the effects desir'd from this Oyntment.

Some, the more exactly to mix the raw Mercury with this oyntment, dissolve it in *Aqua fortis*, and afterwards evaporating it over a gentle fire, mix the Mercury thus dry'd with the remaining part, or else evaporate the *Aqua fortis* thus charg'd among the other Medicaments. But besides that you may very easily and effectually mix the Quick-silver with this oyntment, if you will but take the pains to stir it well with the Turpentine, and afterwards with the Storax, and other Ingredients; it is very inconvenient to introduce the corrosive quality of the *Aqua fortis* into the oyntment, the bad effects whereof tender Constitutions will be sure to feel.

As for the Dose of the Mercury, you may augment or diminish it according to the various purposes of the Physitian, and the Constitutions of the persons for whom the oyntment is prepar'd: So that when you are to anoint persons of a strong Complexion, who resist the penetration of the Mercury, you may augment the quantity to a third, or a half, and that of the Turpentine proportionably, the better to make the mixture: whereas for tender persons, four ounces, or a lesser quantity of Mercury is sufficient; or when you only design the oyntment to kill Fleas, or cure the Itch.

This oyntment is very much us'd for the cure of the Pox, especially when the venom thereof is spread over the whole habit of the body. The principal vertue of it lies in the Mercury, which attenuates, dissolves, and dulcifies thick flegm, which is the Seat

of

of the Venereal Venom, and brings it generally forth by Salivation. The usual custom is to anoint with this oyntment the Arms, the Legs, the Thighs, the Buttocks, and the Spine of the Back; and because that Mercury is accompted a very great Enemy to the Nerves, the best way is to add to this oyntment such Remedies as may in some measure counterbalance its bad effects; such are Oyls of Laurel, Spike, Vipers fat, Liquid Storax, and Turpentine, which fortifying the Nerves, serve also to assist the penetration of the Mercury: Not that all these Medicaments are sufficient to hinder altogether the bad effects of the Mercury, but we may certainly believe, that they do very much abate them. They may be also entirely carri'd off, or at least the greatest part of them dissipated after the Expulsion, by making use of powerful Diaphoretics; and among the rest, volatile salts of Animals, in the number of which is Salt-Ammoniac, of which I my self have seen the wonderful effects, upon a person very coarsly handl'd by the Mercury; which is to be attributed to the volatility and penetration of those Salts, which being dispers'd by the heat of the Stomach through the whole habit of the body, and divided at least into as many Particles as there may be of Mercury, seeking to get out through the pores of the skin, carry along with them such Particles of the Mercury as they meet with in the way, and drive them out mix'd and dissolv'd in the sweat which they have provok'd.

Ceratum Refrigerans.		*A Cooling Cerate.*	
℞. *Olei Rosati,*	℔ *j.*	℞. Oyl of Roses,	℔ j.
Ceræ Albæ,	℥ *iij.*	White Wax,	℥ iij.

Break the Wax, and put it with the Oyl into a glaz'd Earthen-pot, and set the Pot in a hot Mary's Bath, till it be well melted in the Oyl; then taking off the Vessel, stir the oyntment without intermission with a wood'n-Pestle till it be cold, adding in the mean time two ounces of fair water, and continuing the same stirring: when the first water is suckt up, add more, continuing to add more water, and stir, till the oyntment be white enough, and that you find it have water enough; then pour out all the water by inclination, and put up the Cerate for use. Some there are that mix an ounce of Vinegar distill'd to make it more piercing.

This Cerate is very frequent in Shops. It is good to be apply'd, by way of Unction, upon all parts that have need of cooling: For which reason it is very serviceable against heats of the Reins, Flegmons, Erysipela's, and Tetters. It is highly approv'd for appeasing the pain of the Emrods, to cure peelings of the Skin, to allay inflammations of the Thighs, and other parts of the bodies of little Children, and fat pursie people, and to cure chaps, and other sores at the end of Womens Breasts. It serves also for the cure of Burns, alone or mix'd with other oyntments, and to temper the heat of the Hypochondriums. It is also mix'd with oyntment of Ceruse, when there is occasion to dry or close.

Ceratum Santalinum.		*A Cerate of Sanders.*	
℞. *Olei Rosati,*	℔ *j.*	℞. Oyl of Roses,	℔ j.
Ceræ Albæ,	℥ *iiij.*	White Wax,	℥ iiij.

Put them together into a glaz'd Earthen-pot, and melt the Wax in a hot Mary's Bath; take the Pot off the fire, and stir them with a wooden-Pestle till the oyntment be half cold; then

℞. *Rosarum Rubrarum,*	℥ *xij.*	℞. Red Roses,	℥ xij.
Santali Rubri,	℥ *x.*	Red Sanders,	℥ x.
Albi, & Citrini, an,	℥ *vj.*	White, and Yellow, *an.*	℥ vj.
Boli Armenæ,	℥ *vij.*	Bole-Armoniac,	℥ vij.
Spodii,	℥ ß.	Spodium,	℥ ß.
Camphoræ,	℥ *ij.*	Camphire,	℥ ij.

Bruise

Bruiſe the Sanders in a great Marble-Mortar, moiſtning them from time to time with Roſe-watert,o give a red colour to the white and yellow Sanders,and increaſe their ſcent; and having paſs'd them through a Silk-ſieve,heat the red Roſes dry'd in the ſame Mortar; then mix the Powders with the Spodium, and the Bole-Armoniac bray'd upon Porphyry, and the Camphire beaten with never ſo little Spirit of Wine; incorporate all together with the oyntment, and put it up for uſe.

It is good for the cure of Flegmons, to allay the hot intemperatures of the Stomach, Liver and Reins; to which purpoſe it is apply'd alone, or mix'd with equal parts of oyntment of Roſes: Sometimes the Forehead and Temples are anointed therewith, being mix'd with Popler-oyntment, and a little Opium ſomewhat liquid, as well to provoke ſleep, as eaſe the pains of the Head.

Ceratum Stomachicum.		*A Cerate for the Stomach.*	
℞. *Olei Cydoniorum,*	℔ j ß.	℞. Oyl of Quinces,	℔ j ß.
Ceræ Albæ,	℥ *vj.*	White Wax,	℥ vj.
Maſtiches Electæ, &		Choice Myrrh, and	
Roſarum rubrarum, an.	℥ *xx.*	Red Roſes, *an.*	℥ xx.
Foliorum Abſinthii Siccorum,	℥ *xv.*	Dry'd leaves of Wormwood,	℥ xv.
Nardi Indicæ,	℥ *x.*	Indian-Nard,	℥ x.

After you have melted the white Wax, with the Oyl of Quinces, in a glaz'd Earthen-pot over a gentle fire, and ſtirr'd it till it begins to thick'n, incorporate with it all the other ingredients very finely powder'd.

You may melt the Maſtich in ſome part of the Oyl, and mix it afterwards with the diſſolution of the Wax, if the Maſtich be very clean. But becauſe it is generally foul, we are oblig'd to beat it a-part in a Braſs-Mortar, ſprinkling it with ſome drops of water, and to paſs it through a Silk-ſieve; and then this Powder is eaſily mix'd with the reſt.

The Ancients preſcribe, after the melting the white Wax in Oyl of Roſes, to waſh the mixture ſeveral times in Roſe-water; and then having melted it again, to waſh it again with Juice of Quinces, and thick Wine. But becauſe theſe Lotions add very little Aſtringency to theſe ſorts of Remedies, it is much better to make uſe of the Oyl of Quinces wherein the Juice of Quinces has boil'd, and to let alone the Oyl of Roſes.

It is call'd the Stomach-Searcloth, becauſe it is chiefly us'd in diſtempers of the Stomach,which it ſtrengthens, helps digeſtion, gives an appetite, ſtays vomiting, expels wind, digeſts bad humours, and facilitates their expulſion; for which reaſon it is apply'd hot to the Stomach.

Ceratum Diaſulphur.		*A Cerate of Sulphur.*	
℞. *Olei Nucum Juglandium expreſſi,*	℔ *j.*	℞. Oyl of Wall-nuts preſs'd,	℔ j.
Florum Sulphuris,	℥ *ij.*	Flowers of Sulphur,	℥ ij.
Salis Tartari,	℥ *j.*	Salt of Tartar,	℥ j.

Digeſt them all together in a Sand-bath moderately hot, till the Flowers of Sulphur are diſſolv'd in the Oyl: Pour out by inclination the clear liquor into a Braſs Frying-pan tinn'd within, and over a gentle fire melt therein

Ceræ Citrinæ,	℥ *iiij.*	Yellow Wax,	℥ iiij.
Colophoniæ,	℥ *ij.*	Colophony,	℥ ij.

Then taking the Pan from the fire, and ſtirring the Ingredients till they are half cold, incorporate

Myrrhæ Elect. ſubtiliter pulverat. ad pondus omnium, & factum erit Ceratum.	The full weight of all the Ingredients of Myrrh finely powder'd,and the Searcloth is made.

This

This Sear-cloth is very proper to ſoften and diſſolve ſcrophulous Tumours, and all ſorts of exteriour gatherings together of cold Matters hard to diſſolve. It is alſo a Specific to diſſolve Tumours in the Teſticles, caus'd by ſome Venereal Venom, and to cleanſe all ſorts of Ulcers. It is to be ſpread upon Linnen, or upon Leather, and apply'd to the parts affected; but when it is apply'd to the Teſticles, make uſe of a Purſe and Swathing-bands.

CHAP. VI.

Of Emplaſters.

EMplaſters are Compoſitions outwardly apply'd, but more ſolid then Oyntments, ſo as to be made into hard Rolls, or Langates, when they are boil'd, and cold; and are kept wrapt only up in Paper. Emplaſters were invented to make a longer ſtay upon the parts then Oyls and Oyntments, and becauſe they keep much longer, without any diminution of their vertue. Oyls, Fats, Wax, Pitch, dry Roſins, Turpentine and Gums, are the uſual Ingredients of Emplaſters, to which are ſometimes added Litharge, Ceruſe, Verdigreaſe, ſeveral Powders, and ſeveral Liquors.

There are no abſolute Rules for the proportion of the Ingredients, but what are to be obſerv'd in the particular Receipts of ſeveral Plaiſters, in the preparation of which you ſhall find what is to be practis'd, as well for the particular ordering of every Medicament, as for the boiling and mixture of the whole. Emplaſters are us'd for the cure of Wounds and Ulcers, to aſſwage pain, ſtrengthen, ſtay Defluxions, Vomitings, Emrods, for Suppuration, Diſſipating, Diſſolving; and for many other purpoſes too long to recite.

Emplaſtrum Album, ſive de Ceruſa.		*The white Plaiſter, or Plaiſter of Ceruſe.*	
℞. *Ceruſæ Venetæ, &*		℞. Venetian-Ceruſe, and	
Olei Roſati, an.	℔ *iiij.*	Oyl of Roſes, *an.*	℔ iiij.
Aquæ Fontanæ,	℔ *ij.*	Fountain-water,	℔ ij.
Ceræ Albæ,	℥ *viij.*	White Wax,	℥ viij.

Take white, weighty, pure and brittle Ceruſe, and rub it to powder over a Hair-ſieve revers'd: Then put it into a large Copper-Veſſel, broad at the top, and conic toward the bottom, and tinn'd within, and incorporate the oyl and water preſcrib'd, cold as they are, with the Powder, ſtirring them with a ſtrong wooden Spatula, about two foot long, and two fingers broad at one end; then ſet the Pan over a Charcoal-fire lighted in a proper Furnace, and boil the Ingredients, ſtirring them without intermiſſion, till they begin to ſink to the bottom of the Veſſel, not ſo much by the diminution of the heat of the fire, as the conſumption of the water that kept them ſo high: Then taking the Pan from the fire, try the conſiſtence of the Syrup, (and if it be not ſufficiently boil'd, ſet it on again, to evaporate by continual ſtirring that little moiſture that may remain, and hinder the Plaiſter from thickning as it ought. When it is ſufficiently boil'd, melt the Wax into it, ſtill ſtirring it till it be almoſt cold: Then take out the whole maſs, and upon a ſmooth Table moiſten'd, make it up into little rolls, as thick and long as your finger, and cover them with Paper.

Though this Plaiſter may be made with no more then three pound of Ceruſe, according to the old Diſpenſatories, and boiling it very gently, and without making uſe of any moiſture; yet I am of opinion, that the augmenting the weight of the Ceruſe, augments the vertue of the Plaiſter; and that the addition of the water preſerves the whiteneſs of it, and facilitates the preparation. Minium is left out, in regard the Plaiſter is intended to be white, though you may make uſe of Litharge well prepar'd, and it will be almoſt as white as that made with Ceruſe.

According to the directions above-giv'n, while the water ſerves as an Intermedium between the Oyl, the Ceruſe, and the Fire, keeping the Ingredients rais'd, and as it were ſuſpended, and prevents the ill impreſſions which otherwiſe they might receive, you may boil the Plaiſter in an hour, or an hour and a half, and have it as white and as good

good as can be desir'd; and not being subject to the long and troublesom Preparation of the Ancients, there is no fear of that ill success that usually attends it. Nor is there any need of washing the Ceruse, since the Water boyl'd with it, and preserving the good qualities of the Ceruse, during the Coction of the Emplaster, produces a better Effect then all the Lotions that can be expected.

Some add and boyl distill'd Vinegar in this Emplaster, pretending to open the Ceruse, and make it more fit to incorporate with the Oyl: But that care is to little purpose, since that Ceruse, and all Limes, or Calx's of Lead, easily incorporate with Oyl, by the means of boyling and stirring, without the help of the Vinegar.

As for the addition of Bay-salt, I think there is no reason for it; for that would but make the Plaister cause smarting and stinging, which is principally design'd to heal the deformities of the Skin, to dry up Peelings and superficial Exulcerations, to cicatrize Wounds and Ulcers, and allay Inflammations. It is also approv'd for the cure of Scalds and Burnings.

Emplastrum Palmeum.	*The Diapalma Plaister.*
℞. *Lithargyri Auri preparati, & Olei Communis, an.* ℔ *iij.*	℞. Litharge of Gold, and Common Oyle, *an.* ℔ iij.
Axungiæ Suillæ, &	Sows Grease, and
Decocti tenuiorum Ramorum Palmæ vel Quercus, an. ℔ *ij.*	Decoction of the tender Boughs of Palms or Oak, *an.* ℔ ij.

Boyl the tops of the Branches of Palm or Oak, bruis'd or cut very small, over a gentle fire, in three pints of Water, to the consumption of the half; and having press'd out the whole, reserve the strain'd Decoction. Chuse the Litharge of Gold of a deep colour, greasie to handle, and having bruis'd it in a large Brass Mortar, and steep'd it in two or three pints of Water, pour out the thick Water hastily into another Vessel, which Water will be charg'd with the most subtile part of the Litharge, while the grosser descends to the bottom of the Water: then beat the Litharge in the Mortar again, steep it in the first Lotion, or in fresh Water, and having pour'd out the troubl'd Water, by Inclination, into the fine Litharge at the bottom of the Vessel; do this again, till there remain at the bottom of the Mortar nothing but onely the impure Litharge, that will not be beaten smaller: Then let the Lotions settle, and pour out the Water by Inclination, and dry the Pouder. Take the quantity of this Powder prescrib'd, and mix it cold in such a Copper pot as is describ'd for the Ceruse Plaister, stirring it with the Oyle, Grease, and Decoction of Palm-branches; and when they are well incorporated together, boyl them over a good fire, in a proper Furnace, stirring them continually with a wood'n Spatula, and keeping an equal heat during the Coction;

Sub finem, addendo,	*Toward the end whereof, add,*
Chalcitidis nativæ, vel Vitrioli ad rubedinem calcinati, & in portione Decocti diluti, ʒ *iv.*	Of Natural Chalcitis, or Vitriol calcin'd to redness, and steep'd in some part of the Decoction, ʒ iv.

Then boyl them all together to the consistence of an Emplaster.

If you desire the Plaister should look white, add double the weight of white Vitriol.

This Method of Boyling the Tops of the Palm-branches, and consuming the Decoction with the Plaister, is superiour to any other; for while it imparts thereby the Vertue of those Ingredients to the Emplaster, it hinders the bad Impressions of the fire, and boyls the Emplaster in less time.

There is no Plaister more in use then that of *Diapalma*: It is made use of for the cure of Wounds, Ulcers, Tumours, Burns, Contusions, Fractures, Childblains, and to lay upon Cauteries, as well in Plaister, as in Saradrap, and is almost an Universal Remedy for all sorts of external Sores. Sometimes it is reduc'd to the consistence of a Ceruse, by mixing with it a third or fourth part of its weight in Honey, by the name of *Diapalma dissolv'd*, or *Cerate of Diapalma*.

Emplaſtrum Diachylon Simplex.

℞. *Radicum Altheæ mundatarum, & minutim inciſarum,* ʒ *vj.*
Seminum integrorum Lini, & Fœnugreci, an. ʒ *iv.*
Aquæ Fontanæ, ℔ *vj.*

Simple Diachylon Plaiſter.

℞. Roots of Marſh-mallows, cleans'd and cut ſmall, ʒ vj.
Whole Seeds of Line, and Fengreek, *an.* ʒ iv.
Fountain Water, ℔ vj.

Macerate them twenty four hours over a very ſoft fire, ſtirring them from time to time; then boyl then over a gentle fire, to the conſiſtence of a thick Muſcilage: which done, ſtrain and preſs them out ſtrongly. Then

℞. *Olei Communis,* ℔ *iv.*
Lithargyri Auri, ℔ *ij.*

℞. Common Oyle, ℔ iv.
Litharge of Gold, ℔ ij.

Mix the Oyl with the Litharge cold, in a Veſſel like the former; and having added and well incorporated the Muſcilages, ſtir the whole without intermiſſion, and as ſwiftly as may be, as well to keep the Litharge from falling to the bottom, as to procure the Plaiſter its due whiteneſs. Continue boyling and ſtirring till the Maſs begins to ſink, which is a ſign that the greateſt part of the Muſcilages is conſum'd; then ſlack'n the fire to half the heat, and onely to evaporate the ſuperfluous moiſture, which being conſum'd, the Plaſter is ſufficiently boyl'd to the whiteneſs and conſiſtence it ought to have.

Some would have the Muſcilages added by degrees, and at the end of the Coction: But beſide that it is a more tedious way, 'tis moſt certain, that the Muſcilages will bind the Litharge with the Oyle much better, and keep it from burning, not burning themſelves, which they would do, if onely put in at the end; and by their aſſiſtance the Plaiſter becomes much more white, and of a better conſiſtence.

It is call'd *Diachylon*, from the mixture of the Juyces of the Roots of *Althea*, and Seeds of Line and Fengreek. It is call'd White, from its colour.

I need not give you the Receipt of *Emplaſtrum Diachylon Ireatum*, which may be made at any time, by mixing an ounce of fine Powder of *Florence* Orrice, with a pound of *Diachylon*; which is highly recommended to ſoften and diſſolve Hardneſſes and Schyrrous Tumours of the Liver, Spleen, and all the Bowels; to diſcuſs ſcrofulous or Kings-Evil-Humours, and the old remainders of Apoſtemes. It allays the heat of Wounds, conglutinates thoſe which are not very deep, cures the Inflammations of the Neck of the Matrix, being put up like a Peſſarie, eaſes the Gouttie; and, in a word, is proper whereever there is occaſion to mollifie and cool.

Emplaſtrum Diachylon compoſitum Gummatum.

℞. *Radicum Altheæ, mundatarum & minutim inciſarum,* ʒ *iv.*
Ficuum, &
Paſſularum pinguium mundatarum & pariter inciſarum, &
Seminum integrorum Lini, & Fœnugreci, an. ʒ *ij.* ß.
Aquæ Fontanæ, ℔ *vj.*

Compound Diachylon Gumm'd.

℞. Roots of Marſh-mallows, cleans'd and cut ſmall, ʒ iv.
Figgs, and
Fat Raiſins cleans'd and cut ſmall, and
Whole Seeds of Line, and Fengreek, *an.* ʒ ij. ß.
Fountain Water, ℔ vj.

Put them all together into a glaz'd Earthen pot, and ſet the pot over a very ſoft fire for twenty four hours, ſtirring the Matters from time to time with a wood'n Spatula: then augmenting the fire, boyl the whole gently, ſtill ſtirring them, till the Muſcilages are become very thick; ſtrain and preſs them, and reſerve the Muſcilages.

Eodemq; tempore,

℞. *Succorum Scillæ, & Ireos Noſtratis, an.* ʒ *iv.*

And at the ſame time,

℞. Juyces of Squills, and French Orrice, *an.* ʒ iv.

Wrap

Wrap a large Squill in Wheaten paſte, and put it into a Bakers Oven among the Bread; throw away the paſte and the dry skins, and beat the moiſt ſlices in a Marble Mortar, with a wooden peſtle: then ſtrain and preſs out the juyce through a ſmall Linen bag. Raſp or bruiſe the Orrice, newly gather'd, in a Mortar, and ſqueeze out the juyce through a Linen bag.

Tunc in Muſcilaginem redige,		*Then reduce into a Muſcilage*	
Ichthyocollæ minutum inciſæ,	℥ *j.*	Of Mouth-Glew or Water-Glew, cut ſmall,	℥ j.

Put it into a glaz'd Earthen pot, and pour upon it four ounces of the foregoing Juyces: keep the pot over a very ſoft fire, ſtirring the Ingredients with a wooden Spatula, till the whole be reduc'd into a juſt Muſcilage, and keep it apart.

Tunc,		*Then,*	
℞. *Lithargyri Auri preparati,*	℔ *ij.*	℞. Litharge of Gold prepared,	℔ ij.
Oleorum Chamomillæ,		Oyls of Camomil,	
Ireos Noſtratis, &		French Orrice, and	
Anethi, an.	℥ *xvj.*	Aniſe, *an.*	℥ xvj.

Put the Litharge in a proper Copper pot, and incorporate it, from the fire, with the Oyls and the firſt Muſcilages, ſtirring them continually with a wooden Spatula, and boyl them together, as I directed in the white Diachylon: When they are almoſt boyl'd, ſlacken the fire, and add the Muſcilages of the Water-glew, incorporated with the *Oeſipus*, ſtirring them continually, till the moiſture of the Muſcilages be almoſt conſum'd, and that the Compoſition be ſufficiently thick:

Tunc,		*Then,*	
℞. *Terebinthinæ Venetæ,*	℥ *vj.*	℞. Venice Turpentine,	℥ vj.
Reſinæ Pini,		Pine Roſine,	
Ceræ Flavæ, &		Yellow Wax, and	
Oeſipi humidi, an.	℥ *iv.*	Moiſt Greaſe of Wooll, *an.*	℥ iv.
Galbani,		Galbanum,	
Sagapeni, &		Sagapen, and	
Bdellii in Vino dilutorum, trajectorum & ad Mellis denſitatem coctorum, an. ℥ *ij.*		Bdellium diſſolv'd in Wine, paſs'd through a ſtrong Cloth Sieve, & boyl'd to the thickneſs of Honey, *an.*	℥ ij.

Mix the *Oeſipus* with the Water-glew as before. Melt the Wax and Roſin in the hot Conſiſtence: Incorporate the Gums with the Turpentine, and having mixed the whole, ſet it over a gentle fire, till the ſuperfluous moiſture of the Gums be conſum'd; then take the Pan from the fire, let the Plaiſter cool, and make it up into Rolls, to be covered with Paper.

The moſt part of the Receipts of this Emplaſter in the Diſpenſatories, not containing above the half of the Receipt of this, order an ounce and half for the Doſe of every ſort of Muſcilage, not having determin'd the quantity of every part of the Simples out of which they are to be extracted; nor having conſider'd, that ſo ſmall a quantity of Muſcilage cannot communicate much vertue to an Emplaſter which requires more then the ſimple Diachylon, in the Compoſition of which, they have order'd Muſcilages in a larger quantity. For which reaſons, we have preſcrib'd the quantity of the Ingredients out of which the Muſcilages are to be extracted, and ſo order'd it, that the Plaiſter may have its due ſoliditie, and that the Maſs may be conſiderable.

Could you get Gums in tears, perfectly pure, you might ſoften and melt them in a Braſs Mortar, heated with a hot Peſtle, and mix them in the Compoſition being incorporated with the Turpentine, without keeping the Plaiſter long upon the Fire: But being foul, and hardly to be got clean enough for internal Medicines, there is no better way then to diſſolve, ſtrain, and thicken them, as is directed; eſpecially conſidering, that it is

a very difficult thing to powder theſe Gums, eſpecially if they be new; and that for theſe purpoſes there is no great regard to be had to the diſſipation of their ſubtile parts.

This Plaiſter is us'd in all caſes where the ſimple *Diachylon* is preſcrib'd; but it operates with much more efficacy then the other, becauſe of the powerful Ingredients which are added. The principal Vertues of it are, to digeſt, diſſolve, diſcuſs, and ripen all ſorts of Tumours.

Emplaſtrum de Mucaginibus.

℞. *Radicum Altheæ mundatarum, & minutim inciſarum,*
Corticis medii Ulmi pariter inciſi,
Seminum integrorum Lini, &
Fenugreci, an. ℥ j. ß.
Aquæ communes, ℔ *ij.* ß.

Emplaſter of Muſcilages.

℞. Roots of Marſh-mallows, cleans'd, and cut very ſmall,
The middle Rind of Elm, cut in the ſame manner,
Whole Seeds of Line, and
Fengreek, *an.* ℥ j ß.
Common Water, ℔ ij ß.

Put them into a glaz'd Earthen pot, and let them macerate for twenty four hours over a very ſoft fire, ſtirring them often with a wooden Spatula; then augment the fire, and boyl them to a ſufficient thickneſs. Mix with this Muſcilage

Oleorum Chamomillæ,
Liliorum, &
Anethi, &
Medullæ cruris Bovis, an. ℥ j ß.

Oyls of Camomil,
Lillies, and
Dill, and
Marrow of an Oxes Thigh, *an.* ℥ j ß.

Boyl the Muſcilages again, with the Oyls and the Marrow, over a very gentle Fire, for fear of burning the Muſcilages, till the moiſture be almoſt all conſum'd.

Tunc,

℞. *Ceræ Citrinæ,* ℥ *xx.*
Terebinthinæ, ℥ *ij.*
Ammoniaci,
Galbani,
Opopanacis,
Sagapeni, an. ℥ ß.
Croci ſubtiliter pulverat. ℥ *ij.*

Then,

℞. Yellow Wax, ℥ xx.
Turpentine, ℥ ij.
Ammoniac,
Galbanum,
Opopanax,
Sagapen, *an.* ℥ ß.
Saffron finely powdered, ʒ ij.

Melt the Wax in the hot Oyls where the Muſcilages were boyl'd; then take the whole from the fire, and when it is almoſt cold, firſt add the Turpentine with the Gums incorporated, being melted or diſſolv'd as before directed; then laſtly add the Saffron, and make the Plaiſter into Rolls.

The Vertues of this Plaiſter are much the ſame with the former; but it has this particular, not to ſuppurate Swellings which can be cur'd by diſſolution: And therefore it is very much us'd to diſſolve Contuſions in the Head, Breaſts, and other Parts, when you deſire to hinder Suppuration, the Matters not being diſpos'd to that purpoſe. However, it will ripen thoſe that may be conveniently brought to Suppuration.

Emplaſtrum Polychreſtum.

℞. *Olei Communis,* ℔ *ij.*
Aquæ fontanæ ℔ *j* ß.
Ceruſæ, &
Lithargyri Auri, &
Argenti, an. ℔ ß.

A Plaiſter for many Uſes.

℞. Common Oyl, ℔ ij.
Fountain-water, ℔ j ß.
Ceruſe,
Litharge of Gold, and
Silver, *an.* ℔ ß.

Powder the Litharge and Ceruſe, and having incorporated them with the Oyl and Water cold, boyl them in a Copper pan tinn'd within, as directed for the *Diapalma*; and when

when the Water is almoſt conſum'd, and the Ingredients boyl'd to the thickneſs of an Emplaſter,

R. *Ceræ Citrinæ, &*		R. Yellow Wax, and	
Terebinthinæ Venetæ, an.	℥ viij.	Venice-Turpentine, *an.*	℥ viij.

Melt the Wax in little pieces; then take off the Pan from the fire, and add the Turpentine, and when the plaiſter is almoſt cold, make it up into Rolls.

This Plaiſter is call'd *Polychreſtum*, becauſe it is proper for many Infirmities; particularly, for all ſorts of Ulcers and Burns, Chops and Clefts in the Breaſts, Hands, Feet, and Fundament, whether proceeding from Childblains, or otherwiſe. It is alſo us'd for the cure of Wounds, and to diſcuſs and diſſipate the remainder of Apoſtemes. It is alſo proper to make a Saradrap to dreſs Cauteries.

Emplaſtrum Nigrum.		*The Black Plaiſter.*	
R. *Olei Communis,*	℔ j.	R. Common Oyl,	℔ j.
Vini, &		Wine, and	
Aceti, an.	℔ j.	Vinegar, *an.*	℔ j.
Lithargyri Auri, &		Litharge of Gold, and	
Ceruſæ Venetæ, an.	℥ viij.	Venetian Ceruſe, *an.*	℥ viij.

Incorporate the Ceruſe and Litharge with the Oyl cold; then mix them with the Wine and Vinegar, boyl them in a Copper tinn'd Pan as before, over a gentle fire at firſt, but ſo increas'd as to conſume the moiſture. Stir the Ingredients with a wooden Spatula, and continue to boyl them over a moderate fire, till they look of a dark colour, and their conſiſtence be a little thicker then that of ordinary Emplaſters.

Deinde,		*Then,*	
R. *Ceræ Flavæ,*	℔ j.	R. Yellow Wax,	℔ j.
Colophoniæ,		Colophonie,	
Pices Navalis, &		Black Pitch, and	
Terebinthinæ Venetæ, an.	℔ ß.	Venice-Turpentine, *an.*	℔ ß.
Lapidis Magnetis preparati,		Magnet-ſtone prepar'd,	
Plumbi uſti, &		Burnt Lead, and	
Myrrhæ Electæ, an.	℥ ij.	Select Myrrh, *an.*	℥ ij.

Melt the Wax, Pitch, and Colophonie in the hot Compoſition; then take the Pan from the fire, and add the Turpentine, and when the Maſs is half cold, mix the Adamant ground upon Porphyrie, moiſtning it with a little Water, or ſome Vulnerarie Decoction; and the Lead burnt in a Crucible, with equal parts of Sulphur, to make the Plaiſter look more black; and the Myrrh powder'd.

This Plaiſter is highly commended for the cure of all ſorts of Wounds, as well made by Cuts or Thruſts, as bruiſing. It is alſo us'd for the cure of Ulcers, eſpecially thoſe that are old and obſtinate, being very proper to cleanſe and conſolidate.

Emplaſtrum Cephalicum.		*A Cephalic Emplaſter.*	
R. *Gummi Tacamahaccæ ſublimis,*		R. Odoriferous Tacamahacca,	
Benzoyni,		Benjamin,	
Sytracis,		Storax,	
Maſtiches,		Maſtich,	
Hederæ,		Gum Ivie,	
Olibani,		Galbanum,	
Labdani puri, an.	℥ ij.	Pure Labdanum, *an.*	℥ ij.
Cinnamomi, &		Cinnamon, and	
Terebinth. Venetæ, an.	℥ j.	Venice-Turpentine,	℥ j.
Caryophyllorum, &		Cloves, and	
Nucis moſchatæ, an.	℥ ß.	Nutmegs, *an.*	℥ ß.

Beat

Beat together in a large Braſs Mortar, and ſift through a Hair Sieve, the Cloves, Cinnamon, and Nutmegs. Beat the Tacamahacca, Gum Ivie, Benjamin, Maſtich, Olibanum, apart by themſelves, and ſift them through a Hair Sieve. Melt the Labdanum firſt of all in a hot Braſs Mortar, with a heated Peſtle; then the grains of Liquid Storax: after that add the Powders by degrees, well mingled together before, and reduce the whole into a Plaiſter, beating the Maſs as long as the heat of the Mortar and the Ingredients will permit.

You may beat and ſift the Labdanum, if it be very dry; but 'tis not much matter, if you obſerve my Directions. You might alſo melt the moſt part of the Gums in the hot Mortar, if they be clear and pure, or if you made a leſs quantity of Plaiſter; but the beſt way is to pulverize them. You may alſo add a little more Liquid Storax, if you deſire the Plaiſter ſofter. The hardneſs of the Maſs when the Mortar grows cold, requires a continual heat, while you continue to beat the Ingredients, and to heat the out-ſide when you take them forth: and for the ſame reaſons the Plaiſter muſt be roll'd while it is warm.

This Plaiſter is very much uſed in *Languedock* and *Provence*. It ſtrengthens the Brain, ſtays Defluxions, and draws forth the Seroſities and thick and viſcous Humours that annoy it: which you ſhall find true by tryal, contrary to the Opinion of thoſe who ſay, that Emplaſters ſtop the Pores of the Skin. This Plaiſter is uſually laid upon the Mould of the Head, and therefore called by ſome *Emplaſtrum pro Commiſſuris*, *A Plaiſter for the Sutures*. It is alſo appli'd to the Temples, to ſtay Defluxions that fall from the Eyes and Teeth, and to eaſe their pain.

Emplaſtrum Stomachicum.

A Stomach Plaiſter.

℞. *Styracis Electæ,*		℞. Select Storax,	
Tacamahaccæ odoratæ, an.	℥ iv.	Odoriferous Tacamahacca, *an.*	℥ iv.
Succini,		Amber,	
Caryophyllorum,		Cloves,	
Nucis Moſchatæ,		Nutmegs,	
Maſtiches, &		Maſtich, and	
Aloes Succotrinæ, an.	℥ j.	Aloes Succotrine, *an.*	℥ j.
Cinnamomi,	℥ ß.	Cinnamon,	℥ ß.
Styracis liquidæ,	q. ſ.	Liquid Storax,	q. ſ.

Bruiſe together in a large Braſs Mortar, and ſift through a Hair Sieve the Cinnamon, Cloves, Nutmegs, and Amber: Beat apart, and ſift through the ſame Sieve the Tacamahacca, Maſtich, and Aloes. After that, having heated a large Braſs Mortar and Peſtle, melt the Rozen and Storax, and having incorporated them with about four ounces of Liquid Storax, add by degrees the Powders, well mingled before; and after you have beaten the Ingredients for ſome time, to unite them well, take the Maſs out of the Mortar while it is warm, and roll it up before it be cold.

There are ſeveral Receipts of Stomach Emplaſters, compos'd of a great number of Ingredients, but very ill proportion'd, and muſt in all things give way to this; of which all the Ingredients, as odoriferous as full of vertue, are very proper to ſtrengthen the Stomach, aſſiſt Digeſtion, ſtay vomiting, and diſſipate Flatuoſities, and create an Appetite. This Plaiſter is to be ſpread upon Leather, or Silk, like a Scutcheon, and laid warm upon the Stomach, and may be worn for a longer or leſs time, as neceſſity requires

Emplaſtrum Nicotianæ.

The Tabacco Plaiſter.

℞. *Sevi Arietini,*		℞. Rams Tallow,	
Picis Albæ, &		Black Pitch, and	
Reſinæ, an.	℔ j ß.	Roſin, *an.*	℔ j ß.
Ceræ Citrinæ,	℔ j.	Yellow Wax,	℔ j.
Nicotianæ recentis contuſæ,	℔ iij.	Freſh Tabacco-leaves bruis'd,	℔ iij.

Bruiſe

Bruiſe the Tabacco-leaves in a Marble Mortar, with a wood'n Peſtle; and having boyl'd them with the Rams Suet, Pitch, and Rozen, over a gentle fire, in a Copper pan tinn'd, ſtirring them from time to time, till the moiſture of the *Nicotian* be almoſt conſum'd, ſtrain and ſtrongly preſs forth the Compoſition: then let it cool, and having thrown away the Fœces remaining at the bottom,

℞. *Gummi Ammoniaci puri, & Terebinthinæ Venetæ, an.* ℥ *viij.*	℞. Gum Ammoniac pure, and Venice Turpentine, *an.* ℥ viij.

Melt the Gum Ammoniac in a Braſs Mortar heated, and incorporate it with the Turpentine, and mix them with the other Ingredients, off from the fire; and when the Maſs is almoſt cold, make it up into Rolls.

Nicotian being the foundation of this Plaiſter, and the Ingredient that gives it its principal Vertue, 'tis but reaſon that it ſhould be us'd in a larger quantity then is preſcrib'd in ſeveral Diſpenſatories: and to the end it may equally communicate its Colour and Vertue, in ſtead of making uſe of the Juyce, as the Ancients did, the better way is to put in the Leaves whole, and bruis'd, according to the foregoing Directions.

This Plaiſter is recommended to mollifie hard internal Tumours, particularly thoſe of the Liver and Spleen, although they ſhould prove to be Schirrous; whence it has acquir'd the name of *The Hepatic and Splenetic Plaiſter.*

Emplaſtrum de Cicuta.	*The Hemlock Plaiſter.*
℞. *Olei Sambuci,* ℔ *ij.* *Succi Cicutæ,* ℔ *j.* ß. *Lithargyri Auri,* ℔ *j.*	℞. Oyl of Elder, ℔ ij. Juyce of Hemlock, ℔ j. ß. Litharge of Gold, ℔ j.

Boyl over a moderate fire the Litharge of Gold powder'd, with the Oyl and Juyce preſcrib'd, ſtirring them continually with a large wood'n Spatula, till the moiſtnre be almoſt conſum'd, and that the Maſs have the conſiſtence it ought to have:

Tunc,	*Then,*
℞. *Succi Cicutæ ad Mellaginem inſpiſſati,* ℔ ß.	℞. Juyce of Hemlock thick'nd to the ſubſtance of Honey, ℔ ß.

Boyl the Juyce to the thickneſs of Honey, and over a gentle fire evaporate the ſuperfluous moiſture.

Poſtea jungatur,	*Afterwards add,*
Gummi Ammoniaci Aceto Scillitico ſoluti trajecti, & lento igne ſpiſſati, ℔ j.	Gum Ammoniac diſſolv'd in Vinegar of Squills, paſs'd through a ſtrong cloth, and thick'nd over a gentle fire, ℔ j.

Stir the whole continually, till the Emplaſter have acquir'd a laudable conſiſtence, and be fit to be made up in Rolls.

You may alſo make a Plaiſter of Hemlock, making the ſame preparation of it as of *Nicotian*, and mixing it with the ſame Medicaments as are preſcrib'd for the *Nicotian* Plaiſter, and obſerving the ſame Doſes.

The Hemlock Plaiſter may produce the ſame Effects as that of *Nicotian*, being us'd for the ſame Infirmities; and it may be as well call'd *The Hepatic and Splenetic Plaiſter.*

Emplaſtrum Diaphoreticum.	*A Diaphoretic Plaiſter.*
℞. *Ceræ Flavæ,* ℥ *xvj.* *Myrrhæ Electæ,* *Colophoniæ, an.* ℥ *iv.* *Succini Citrini,* ℥ *iij.*	℞. Yellow Wax, ℥ xvj. Select Myrrh, Colophonie, *an.* ℥ iv. Yellow Amber, ℥ iij.

Terebinthinæ,

Terebinthinæ,	Turpentine,
Gummi Ammoniaci, &	Gum Ammoniac, and
Galbani in Aceto diſſolutorum, trajectorum, & ſpiſſatorum, an. ℥ ij.	Galbanum, all diſſolv'd in Vinegar, paſs'd through a ſtrong Cloth, and thick'nd, *an.* ℥ ij.
Sandaracæ, ℥ j.	Sandarach, ℥ j.
Thuris & Maſtichis, an. ℥ ß.	Frankincence and Maſtich, *an.* ℥ ß.

After you have powder'd the Myrrh, Amber, Frankincenſe, and Maſtich, every one apart, and paſs'd them through a Silk Sieve, diſſolve the Ammoniac and Galbanum in Vinegar, ſtrain through a courſe Cloth, and thick'n them over a gentle fire. Melt the Wax and Colophonie in a Copper pan, and when the Ingredients are half cool'd, put in the thick'nd Gums incorporated with the Turpentine; and a while after, add the Powders, and the Emplaſter is made.

This Plaiſter is good to draw forth Seroſities that lie in the Fleſh, through the pores of the Body; ſo that you ſhall find them in drops upon the Plaiſter and the Skin. It is a Specific againſt the Sciatica, the Tumours under the Ears, Swellings of the Hands and Feet, and all Tumours that require not Suppuration. It is alſo prevalent againſt the Scorbutic Hardneſſes of the Legs, Nerves, and Joynts; againſt Contuſions, to diſcharge them of the Seroſities that fall upon them at the time of Fractures and Diſlocations, and to allay the pains thereof.

Emplaſtrum de Galbano.

The Galbanum Plaiſter.

℞. *Galbani,* ℥ *vj.*	℞. Galbanum, ℥ vj.
Emplaſtri de Meliloto, &	Emplaſter of Melilot, and
Diachyli ſimplicis, an. ℥ *iij.*	Simple Diachylon, *an.* ℥ iij.
Ceræ Flavæ, ℥ *ij.*	Yellow Wax, ℥ ij.
Terebinthinæ Venetæ, ℥ *j.*	Venice Turpentine, ℥ j.
Croci Pulverati, ℥ *vj.*	Saffron pulveriz'd, ℥ vj.

Diſſolve the Galbanum in Vinegar, paſs it through a ſtrong Cloth, and thick'n it over a moderate Fire: Melt the Wax, cut in pieces, with the Diachylon and Melilot, over a ſoft Fire: then add the Turpentine, incorporated with the Galbanum. Then take it off the fire, ſtir it till it begins to grow thick, and laſtly add the Saffron powder'd.

This Plaiſter has been very much experimented for the ſoftning and diſſolving of hard and ſchirrous Tumours; to aſſwage the Pains of the Shoulders, the Breaſt, the Sides, the Nipples, the Hypochondrium, Liver and Spleen, caus'd by Flatuoſities or cold Humours: For, it ſoftens, aſſwages, digeſts, diſſolves, and powerfully diſcuſſes Matters gather'd together in thoſe Parts.

Emplaſtrum de Meliloto.

Melilot Plaiſter.

℞. *Summitatum floridarum Meliloti,* ℥ *iij.*	℞. The flowrie Tops of Melilot, ℥ iij.
Radicis Iridis,	Root of Orrice,
Seminis Fenugreci,	Fengreek-ſeed,
Foliorum Abſinthii,	Leaves of Wormwood,
Gummi Ammoniaci,	Gum Ammoniac,
Myrrhæ, an. ℥ *j.*	Myrrh, *an.* ℥ j.
Radicum Cyperi,	Roots of Cyperus,
Altheæ,	Marſh-mallows,
Nardi Celticæ,	Celtic Nard,
Baccarum Lauri,	Laurel Berries,
Florum Chamomillæ,	Flowres of Camomil,
Croci, an. ℥ ß.	Saffron, *an.* ℥ ß.
Ceræ Citrinæ, ℔ *j.*	Yellow Wax, ℔ j.
Reſinæ,	Roſin,
Picis Albæ,	White Pitch,
Sevi Hircini, an. ℥ *iv.*	Goats Tallow, *an,* ℥ iv.
Terebinthinæ Venetæ, &	Venice Turpentine,
Olei Abſinthii, an. ℥ *iij.*	Oyl of Wormwood, *an* ℥ iij.

Dry

Dry and pulverize the Saffron apart; beat the Roots, Seeds, Berries, Herbs, Flowers, and alſo the Gums, being choſen very pure, and paſs them through a Silk-ſieve: Melt the Wax over a gentle fire in a Copper-pan, together with the Roſin, white Pitch, and Goats Tallow, after which add the Turpentine and Oyl of Wormwood; then take the Pan from the fire, let it cool a little, then incorporate the Powders by degrees, and when all the Ingredients are well united, make up the Plaiſter in Rolls, and paper it up for uſe.

The moſt part of the Receipts of Melilot in the Diſpenſatories are very much perplex'd, as well for the great number of Medicaments, the irregular proportions, as the various and irrational preparations: And therefore I am perſwaded this Receipt will be admitted before others, when the regularity of the proportions, and the eaſineſs of the preparation ſhall be examin'd.

This Plaiſter is chiefly recommended to thicken and diſcuſs hard and condens'd matters: among the reſt, the inveterate hardneſſes of the Spleen, Liver and Stomack, and all the Bowels. It is alſo proper to bring down the extenſion of the Hypochondriums, to diſſipate Flatuoſities, and appeaſe the pains that are caus'd thereby.

Emplaſtrum de Betonica.

℞. *Foliorum virentium*
Betonicæ,
Lauri,
Plantaginis,
Apii, &
Verbenæ rectæ contuſorum, an. M iij.
Reſinæ,
Picis Albæ,
Terebinthinæ Venetæ, &
Ceræ Citrinæ, an. ℔ ij.

The Betony-Plaiſter.

℞. The green leaves of
Betony,
Laurel,
Plantain,
Parſley, and
Vervain rightly bruis'd, *an.* M iij.
Roſin,
White Pitch,
Venice-Turpentine, and
Yellow Wax, *an.* ℔ ij.

Bruiſe the leaves in a Marble-Mortar with a wooden Peſtle; melt the Wax, Pitch and Roſin over a gentle fire in a tinn'd Copper-Pan, and afterwards the Turpentine; and then having mix'd the bruis'd Herbs with them, boil them together, ſtirring them continually over a gentle fire, till the moiſture of the Herbs be almoſt all conſum'd: Strain the Ingredients hot through a New Cloth, and preſs them ſtrongly forth; when the ſtraining is almoſt cold, ſeparate and throw away the Feces, and melt it again over a ſoft fire: Take it off; and when it begins to thicken, and to be half cold,

℞. *Maſtiches, &*
Olibani ſubtiliter pulverat. an. ℥ ij.

℞. Maſtich, and
Olibanum very finely powder'd, *an.* ℥ ij.

Mix them with the Compoſition, and make up the Plaiſter into Rolls.

This Plaiſter bears the Name of Betony, as being the principal Ingredient. There are ſeveral Receipts, ſome leſs, ſome more compounded. Some only make uſe of the Juices of theſe Plants: But certainly the Herbs bruis'd and boil'd among the other Ingredients, are incomparably better for the reaſons already alledg'd. Some uſe black Pitch, though inferiour to the white, as well becauſe it diſcolours the Plaiſter, as for that it has loſt much of its good parts by the burning of the branches of the Trees from whence it was drawn; whereas white Pitch flows of it ſelf from the Tree, and poſſeſſes all thoſe volatile parts which are diſſipated in the other.

The uſe of this Plaiſter is to heal wounds of the Head, which it cleanſes and cicatrizes. It alſo fetches out of the pores of the Skin the ſeroſities that ſtay in ſeveral parts of the body, eſpecially thoſe of Sciatica's and Rhumatiſmes. It alſo diſſolves Contuſions, and ſoften Corns in the Feet.

Emplaſtrum Manus Dei.

℞. *Olei communis,* ℔ *viij.*
Lithargyri Auri præp. ℔ *iiij.*
Ceræ Citrinæ, ℔ *ij.*
Terebinthinæ Venet. ℔ *j.*
Galbani,
Opoponacis,
Ammoniaci,
Sagapeni,
Myrrhæ,
Olibani,
Maſtiches, an. ℥ *viij.*
Olei Laurini, ℥ *vj.*
Lapidis Calaminaris,
Magnetis,
Ariſtolochiæ longæ & rotundæ, an. ℥ *iiij.*

The Plaiſter of Gods Hand.

℞. Common Oyl, ℔ viij.
Litharge of Gold prepar'd, ℔ iiij.
Yellow Wax, ℔ ij.
Venice-Turpentine, ℔ j.
Galbanum,
Opoponax,
Ammoniac,
Sagapen,
Myrrh,
Olibanum,
Maſtich, *an.* ℥ viij.
Oyl of Laurel, ℥ vj.
Lapis Calaminaris,
Loadſtone,
Long and round Birthwort, *an.* ℥ iiij.

Grind the *Lapis Calaminaris* and Loadſtone upon a Porphyry moiſten'd with ſome vulnerary water, and dry them. Beat together in a large Braſs-Mortar the two Birthworts, and the Myrrh and Maſtich apart; ſift all the Powders together thorough a Silk-ſieve; then put the full weight of the Galbanum, Ammoniac, Opoponax, and Sagapen, well bruis'd, into an Earthen glaz'd pot, and diſſolve them over a gentle fire, in about two pints of good Vinegar; ſtrain them hot through a ſtrong Cloth, and having well preſs'd them, return that which remains in the Cloth over the fire; and having diſſolv'd it in new Vinegar, ſtrain'd and preſs'd it as before, evaporate by degrees over a gentle fire the ſuperfluous moiſture of the Vinegar, and boil the Gums till they are ſufficiently thick, at which time incorporate the Turpentine, and keep the whole apart.

Then having put the Litharge of Gold prepar'd in Powder in a Copper-Pot tinn'd, incorporate it cold with the Oyl, ſtirring them continually with a large wood'n Spatula; then mix therewith three pints of common water, and boil them together over a good fire, ſtirring them without intermiſſion, till the whole has acquir'd the conſiſtence of a ſolid Emplaſter: At which time melt the Wax; and then taking the Pot off the fire, when the whole is ſomewhat cold, add the Gums incorporated with the Turpentine, and Oyl of Laurel, and laſtly the Powders, and be ſure that all the Ingredients be well united together.

Manus Dei Plaiſter is very famous, and has been much us'd for a long time, ſo that many Ladies of Quality take the pains to make it, and diſtribute it to the Poor, whom I adviſe to be careful of the directions here giv'n for its preparation: For it is not enough to have a good Receipt, if the Medicine be ſpoil'd in the preparation. The addition of the water cauſes the Plaiſter to be ſooner boil'd, keeps the Litharge from ſinking, and the Oyl from burning.

Which occaſions me to give this farther *Item*, that you muſt ſtay till the Litharge and Oyl have acquir'd the conſiſtence of a ſolid Plaiſter, before you add the Wax; otherwiſe by the addition of the weight of the Wax, which you muſt be conſtrain'd to augment, the Plaiſter would prove too ſoft.

This Plaiſter is every day ſucceſfully us'd for the cure of all ſorts of Wounds, Ulcers, Contuſions and Tumours: It mollifies, digeſts, diſſolves, and brings to ſuppuration ſuch matters as require it: For it never ſuppurates thoſe which may be diſſipated by tranſpiration, or otherwiſe; and when it has ripen'd and drawn the matters forth, it draws no more, but cleanſes, cicatrizes, and conſolidates altogether.

Emplaſtrum *Andreæ a Cruce.*

℞. *Reſinæ,* ℥ *xij.*
Gummi Elemmi, ℥ *iiij.*
Terebinthinæ Venetæ, &
Olei Laurini, an. ℥ *ij.*

The plaiſter of Andrea Cruce.

℞. Roſin, ℥ xij.
Gum Elemmi, ℥ iiij.
Venice-Turpentine, &
Oyl of Laurel, *an.* ℥ ij.

Break

Break the Roſin and Gum Elemmi, and having melted them together over a gentle fire, add the Turpentine, and Oyl of Laurel; and when they are all well incorporated, ſtrain the whole through a Cloth, to ſeparate the filth that may be mix'd with the Gums; then let the Plaiſter cool, and roll it up.

This Plaiſter is us'd for wounds of the Breaſt, for which it ſerves without a Tent. It is alſo proper to cleanſe and conſolidate other wounds and Ulcers, to diſſipate Contuſions, ſtrengthen the parts in Fractures and Diſlocations of the bones, and to draw forth from the Pores ſuch ſerous humours, as are the cauſe of the Sciatica and Rhumatiſmes.

Emplaſtrum Magneticum Angeli Salæ.		Angelus Sala's *Magnetic Plaiſter.*	
℞. *Sagapeni,*		℞. Sagapen,	
Ammoniaci, &		Ammoniac, and	
Galbani, an.	℥ iij.	Galbanum, *an.*	℥ iij.
Ceræ Flavæ,		Yellow Wax,	
Terebinthinæ, an.	℥ iiij ß.	Turpentine,	℥ iiij ß.
Magnetis Arſenicalis,	℥ iij.	Arſenical Magnet,	℥ iij.
Terræ Vitrioli lotæ,	℥ j.	Earth of Vitriol waſh'd,	℥ j.
Olei ſuccini,	℥ ß.	Oyl of Amber,	℥ ß.

Angelus Sala, the Author of this Plaiſter, prepares it thus.

After you have diſſolv'd the Gums in twenty ounces of Vinegar of Squills over a moderate fire, paſs them through a ſtrong Cloth, and boil them to the ordinary conſiſtence of Emplaſters, melt the Wax in a Copper-Pan with the Oyl of Amber, and having taken them off the fire, incorporate with them the Turpentine, Earth of Vitriol, and Arſenical Magnet finely pulveriz'd, together with the Gums thickn'd, and the Plaiſter is made.

Magnes Arſenicalis.		*The Arſenical Magnet.*	
℞. *Antimonii Hungarici,*		℞. Hungarian Antimony,	
Sulphuris Flavi, &		Yellow Sulphur,	
Arſenici Chryſtallini, an.	℥ ij.	Chryſtaline Arſenic, *an.*	℥ ij.

Pulverize two ounces of pure Antimony, as much yellow Sulphur, and as much Chryſtaline Arſenic; and having mingl'd them together, put them over a Sand-bath moderately hot, keep the Cucurbit there till the Ingredients are altogether diſſolv'd, which you ſhall know by putting into the ſubſtances a ſmall iron rod, for then they will ſtick to the rod and rope like Turpentine, but of a red ſhining colour, and like to Marcaſites: Then let the Matters cool, break the Cucurbit, and keep the maſs to be pulveriz'd, when occaſion requires.

There are ſome, who to prepare Earth of Vitriol, ſublime it with equal parts of Salt-Ammoniac: But beſides that it is a difficult thing ſo to ſublime the acid and ſalt parts either of the one or the other, but that there will remain ſome portion among the Earth, there is no need of adding Salt-Ammoniac to the Vitriol, nor any thing elſe to obtain the Earth, in regard you may eaſily find it at the end of the Diſtillation. As for waſhing the Earth of Vitriol, which ſome contend againſt, I think the Authors judgment is to be follow'd, who preſcribes it waſh'd. Beſides, I am of opinion, that a dry Earth depriv'd of all the parts neceſſary to compoſe a mix'd body, is more proper to receive and impregnate it ſelf with new ſubſtances, then if it had all that is requir'd to make up the body of a real Vitriol; conſidering that it is not intended to cut or attenuate, but to ſuck up, or draw to it ſelf the ſuperfluous matters of the wounds, which may have ſome ſimilitude of ſubſtance with the acid or ſalt parts which are found in the compoſition of the Vitriol. And to ſhew that this Earth ſtill retains a Magnetic faculty, we find by experience, that being expos'd to the Air for ſome time, eſpecially in the night, it rebecomes Vitriol, and is able to afford almoſt the ſame Spirit, and the ſame parts which it had before Diſtillation.

The Author of this Plaiſter cries it up highly, and affirms, that being apply'd upon Bubo's and Peſtilential Carbuncles, it ripens them quickly, opens them, and draws at the ſame time the Venom from the center to the circumference, by its magnetic faculty and ſimilitude of ſubſtance, not permitting the wound to cloſe, till all the venomous matter be drawn forth. He alſo aſſures us, that it makes the wound fit to be cleans'd

and conſolidated, when all the virulent matter is drawn forth. It alſo perfectly cures the Kings-Evil, drawing the ſcrofulous matters from the remote parts of the body, perfecting it's work in five or ſix weeks; after which, it cloſes up the part without the uſe of any other Remedy: However, the Patient muſt be careful to purge, during the Cure, and to uſe Specific Decoctions, and other internal Remedies proper for the diſtemper. Being laid to old, putrid, and obſtinate Ulcers, it draws out the Venom in two or three days, and cauſes a black Scab, which is to be ſoften'd with Butter, which being taken off, you ſhall find the fleſh underneath very clean and lively.

The Arſenical Magnet is only a gentle Cauſtic, which operates with eaſe and ſucceſs.

Emplaſtrum Divinum.

The Divine Plaiſter.

℞. *Lithargyri Auri præp.*	℔ *i* ß.	℞. Litharge of Gold prepar'd,	℔ i ß.
Olei communis,	℔ *iij.*	Common Oyl,	℔ iij.
Aquæ Fontanæ,	℔ *ij.*	Fountain-water,	℔ ij.

Boil them together to the thickneſs of an Emplaſter.

Deinde permiſce		*Add then*	
Lapidis Magnetis præp.	℥ *vj.*	Magnet-ſtone prepar'd,	℥ vj.
Gummi Ammoniaci,		Gum-Ammoniac,	
Galbani,		Galbanum,	
Opoponacis, &		Opoponax,	
Bdellii, an.	℥ *iij.*	Bdellium, *an.*	℥ iij.
Myrrhæ,		Myrrh,	
Olibani,		Olibanum,	
Maſtiches,		Maſtich,	
Viridis Æris, &		Verdigreaſe, and	
Ariſtolochiæ Rotundæ, an.	℥ *i* ß.	Round Birth-wort, *an.*	℥ i ß.
Ceræ Flavæ,	℥ *viij.*	Yellow Wax,	℥ viij.
Terebinthinæ,	℥ *iiij.*	Turpentine,	℥ iiij.

Diſſolve the Ammoniac, Galbanum, Bdellium and Opoponax in Vinegar over a ſoft fire, and thicken them as before directed; prepare the Magnet, as before directed: Beat the Olibanum, Maſtich, Myrrh and Birthwort apart, and having boil'd and thicken'd the Litharge, Oyl, and Water, as before, then melt the Wax in the hot Compoſition; and when the Pan is off the fire, and the matters half cold, add the Gums thick'nd and incorporated with the Turpentine; then the Magnet mix'd with the Birthwort, Myrrh, Maſtich, and Olibanum; and laſtly, the Verdigreaſe; and having well ſtirr'd and mix'd all the Ingredients together, make up the Plaiſter into Rolls.

The vertues and uſes of this Plaiſter are much the ſame with thoſe of *Manus Dei*: It is nevertheleſs more cleanſing, and accompani'd with ſome Acrimony, by reaſon of the Verdigreaſe which it contains. Nevertheleſs, they may be us'd for the ſame purpoſes, the one as well as the other, and the one inſtead of the other.

Emplaſtrum Paracelſi.

Paracelſus.

℞. *Olei communis,*	℔ *ij.*	℞. Common Oyl,	℔ ij.
Lithargyri Auri,	℔ *j.*	Litharge of Gold,	℔ j.
Ceræ Flavæ,	℔ ß.	Yellow Wax,	℔ ß.
Terebinth. venet.	℥ *iiij.*	Venice-Turpentine,	℥ iiij.
Gummi Ammoniaci, &		Gum-Ammoniac, and	
Elemmi, an.	℥ *ij.*	Elemmi, *an.*	℥ ij.
Olei Laurini,	℥ *i* ß.	Oyl of Laurel,	℥ i ß.
Bdellii,		Bdellium,	
Opoponacis,		Opoponax,	
Galbani,		Galbanum,	
Maſtiches,		Maſtich,	

Myrrhæ,

Myrrhæ,		Myrrh,	
Thuris,		Frankincenſe,	
Aloes,		Aloes,	
Radicis Ariſtolochiæ Rotundæ,		Root of round Birth-wort,	
Lapidis Calaminaris, an.	℥j.	Lapis Calaminaris, *an.*	℥j.

Having incorporated the Oyl and the Litharge in a large Plaiſter-Pan, and mix'd with them about a pint and a half of water, boil them together, ſtirring them continually with a large wood'n Spatula; and when they are boil'd, melt the Wax in them: then take the Pan from the fire, and mix firſt the *Gummi Elemmi*, melted with the Oyl of Laurel, and ſtrain'd through a Linnen-cloth; after which, add the Ammoniac, Galbanum, Bdellium, and Opoponax diſſolv'd in Vinegar, ſtrain'd through a ſtrong Cloth, and well thick'nd over a ſoft fire, and incorporated with the Turpentine; then add the Birthwort-root and Calaminaris finely powder'd; and laſtly, the Powders of Myrrh, Aloes, Frankincenſe, and Maſtich; and having well incorporated the whole, make up the Plaiſter into Rolls.

The vertues of this Plaiſter are much the ſame with thoſe of *Manus Dei*, and the Divine Plaiſter, nevertheleſs it dries and cicatrizes more.

Emplaſtrum de Linamento.		*A Plaiſter of Lint.*	
℞. *Linamenti veteris minutim inciſi,*	℥ viij.	℞. Old Lint cut ſmall,	℥viij.
Olei communis, &		Common Oyl, and	
Aquæ Fontanæ, an.	℔ ij.	Fountain-water, *an.*	℔ iij.

Boil the Lint in the Oyl and Water preſcrib'd over a gentle fire, till a third part of the water be conſum'd; then ſtrain and ſtrongly preſs out the whole.

Expreſſioni adde		*To the ſtraining add*	
Ceruſæ Venetæ pulverat.	℔ ij.	Venice-Ceruſe,	℔ ij.

Boil them together in a Copper-Pan over a moderate fire, ſtirring them continually, to the ſubſtance of ordinary Plaiſters; then

In illis liquefiant		*Melt in the hot Compoſition*	
Ceræ Citrinæ,	℥ xij.	Yellow Wax,	℥ xij.

And when the whole is half cold,

℞. *Myrrhæ,*		℞. Myrrh,	
Maſtiches,		Maſtich,	
Olibani, an.	℥ iij.	Olibanum, *an.*	℥ iij.
Aloes electi,	℥ ij.	Select Aloes,	℥ ij.

Powder them very finely, and mix them with the reſt; and when all the Ingredients are well incorporated, make up the Plaiſter into Rolls.

Emplaſtrum Iſchiadicum.		*A Plaiſter for the Sciatica.*	
℞. *Ceræ Citrinæ,*		℞. Yellow Wax,	
Picis Albæ, &		Pitch white, and	
Nigræ, &		Black, and	
Terebinthinæ, an.	℥ iiij.	Turpentine, *an.*	℥ iiij.
Gummi Ammoniaci, &		Gum-Ammoniac, and	
Florum Sulphuris, an.	℥ ij.	Flowers of Sulphur, *an.*	℥ ij.

Olibani,

Olibani,		Olibanum,	
Ireos, &		Orrice, and	
Fenugreci pulveratorum, an.	℥ j.	Fengreek powder'd, *an.*	℥ j.

Powder the Orrice, Fengreek, and Olibanum a-part; and having mix'd them with the Flowers of Sulphur, melt the Ammoniac, the pureſt you can get, in a large Brazen-Mortar heated, and incorporate it with the Turpentine; then having melted the Wax and the Pitch in a ſmall Copper-Pan over a gentle fire, and paſs'd them, mingle therewith the Ammoniac incorporated with the Turpentine; when the Compoſition is half cold, mix the Powders, and make up the Plaiſter into Rolls.

This Plaiſter is very effectual againſt Sciatic Gouts, drawing forth the ſeroſities which are uſually the cauſe of thoſe Evils, and eaſes the pains thereof. It is alſo very proper againſt Rhumatiſmes, and diſcuſſes pains that are caus'd by ſeroſities gather'd in the Fleſh. You muſt be careful to take off the Plaiſter night and morning, and to wipe the part affected, before you lay it on again.

Emplaſtrum Stomachicum.

A Stomach-Plaiſter.

℞. *Gummi Tacamahaccæ ſublimis,*	℥ iiij.	℞. Odoriferous Tacamahacca,	℥ iiij.
Labdani puri,		Pure Labdanum,	
Benjamini,		Benjamin,	
Succini, &		Amber, and	
Reſinæ Storacis, an.	℥ ij.	Roſin of Storax, *an.*	℥ ij.
Styracis Liquidæ,	℥ j.	Liquid Storax,	℥ j.
Olei Nucis Moſchatæ,	℥ ß.	Oyl of Nutmegs,	℥ ß.

Pulverize very finely a-part the Amber, Benjamin, and Tacamahacca; prepare the Roſin of Storax, as for the Treacle: Heat a large Braſs-Mortar and Peſtle, and having melted the Labdanum therein, incorporate with it the Roſin of Storax, the Liquid Storax, and by little and little, the Powders in the laſt place; and having beaten the Maſs as long as the heat of the Mortar, and the Ingredients will permit, take it out, and make it into Rolls, to be cover'd with Paper.

This Plaiſter is of a pleaſing ſcent; it wonderfully fortifies the Stomach, diſſipates Wind, gives an Appetite, aſſiſts Concoction of the Nouriſhment, and ſtays Vomiting, being laid upon the pit of the Stomach.

There are ſeveral Stomach-Emplaſters in ſeveral Diſpenſatories, but far inferiour in vertue and odour.

This Plaiſter may be us'd inſtead of the Maſtich-Plaiſter, if you only add to its Compoſition two ounces of Powder of Maſtich.

Emplaſtrum pro Matrice.

A Plaiſter for the Matrix.

℞. *Galbani purificati & ſpiſſati,*	℥ iiij.	℞. Galbanum puriſi'd and thickn'd,	℥ iiij.
Tacamahaccæ, &		Tacamahacca, and	
Ceræ Citrinæ, an,	℥ iij.	Yellow Wax, *an.*	℥ iij.
Myrrhæ Electæ, &		Select Myrrh, and	
Terebinthinæ, an	℥ iij.	Turpentine, *an.*	℥ iij.
Aſſæ-Fœtidæ,	℥ j.	Aſſa-fœtida,	℥ j.
Pinguedinis in ciſtide Caſtorei contentæ,	℥ ß.	The fat contain'd in the bag of the Caſtor,	℥ ß.
Oleorum ſtillatitiorum Succini, & Rutæ, an.	℥ j.	Diſtill'd Oyls of Amber, and Rue, *an.*	℥ j.

The Impurities uſually mix'd with Galbanum, conſtrain us to diſſolve it with the Aſſa-Fœtida in good Vinegar, and to paſs them through a Cloth, and to thick'n them over a very ſoft fire: After which, unite theſe Gums with the Turpentine, to incorporate the whole with the Turpentine cut into little pieces, and melted over a very ſoft fire in a Copper-Pan; add the Caſtors fat, and a while after the Myrrh and Tacamahacca powder'd; laſtly, the diſtill'd Oyls, and then ſtir and incorporate the whole well together with a wood'n-Peſtle, and the Plaiſter is made.

This

This Plaiſter, as it is here preſcrib'd, is compos'd of Ingredients well ſelected, and well proportion'd, and the preparation is not difficult. It is proper to quiet the irregular motions of the Matrix, to ſuppreſs the vapours, and prevent the Suffocations by them caus'd. It is to be ſpread upon Leather proportionable, and laid upon the Navel, letting it lye on as long as is neceſſary. Sometimes you may put a grain of Musk or Cotton upon the middle of the Plaiſter before you lay it on, or elſe put up at the ſame time ſome few grains of Musk or Civet wrapt in Cotton into the Neck of the Matrix.

Emplaſtrum Oxycroceum.

℞. *Ceræ Citrinæ,*
Picis Navalis, &
Colophoniæ, an. ℔ *j.*
Terebinthinæ, ʒ *iiij.*
Gummi Ammoniaci, &
Galbani aceto diſſolutorum, trajectorum & ſpiſſatorum,
Croci,
Myrrhæ, &
Thuris ſubtiliter pulveratorum, an. ʒ *iij.*

Oxycroceum-Plaiſter.

℞. Yellow Wax,
Black Pitch, and
Colophony, *an.* ℔ j.
Turpentine, ʒ iiij.
Gum-Ammoniac, and
Galbanum diſſolv'd in Vinegar, ſtrain'd and thick'nd,
Saffron,
Myrrh, and
Frankincenſe very finely pulveriz'd, *an.* ʒ iij.

Having finely pulveriz'd apart the Saffron, Myrrh, Frankincenſe and Maſtich, and diſſolv'd in Vinegar, ſtrain'd and thick'nd over a gentle fire the Galbanum and Ammoniac, melt the Wax over a fire as gentle, adding thereto the Pitch, and Colophony, being well choſen: Then take the Pan off the fire, and add the Galbanum and Ammoniac, incorporated before with the Turpentine; a little while after add the Powders, and mix the whole well.

This Plaiſter takes its Name from the Saffron and Vinegar which is us'd for the diſſolution of the Gums: It ſoftens, and diſſolves hardneſſes, aſſwages the pains of the Nerves and Muſcles, diſſipates Contuſions, fortifies the parts in Fractures and Diſlocations of Bones; cauſes the Seroſities there gather'd together to tranſpire, prevents new ones from flowing down, and helps very much the Generation of Calloſity in the Fractures of Bones.

Emplaſtrum contra Herniam.

℞. *Pellem Arietinam recentem cum ſua lana in partes diſſectam; coque igne moderato, in ſufficiente quantitate aquæ, donec pellis omnino in aqua diſſoluta fuerit. Coletur decoctum, lanaque fortiter exprimatur. In expreſſione coquantur Granorum alborum viſci quercini, vel alterius Arboris aſtringentis,* ʒ *vj.*

Lumbricorum terreſtrium in vino lotorum ʒ *iiij. ad ipſorum diſſolutionem.*

Deinde colentur, & exprimantur; expreſſio vero cum Lithargyri Auri præparati, & Oleorum Cydoniorum & Myrtillorum, an. ℔ *j. in Emplaſtrum coquatur.*

In illis deinde Liquefiant,
Ceræ Citrinæ, ℔ *j.*
Picis Navalis,
Reſinæ,

A Plaiſter againſt Burſtneſs.

℞. Take the skin of a Ram newly kill'd, with the Wooll, cut in pieces; boil it over a moderate fire in a ſufficient quantity of water, till the skin be altogether diſſolv'd in the water: Strain the Decoction, and ſtrongly preſs forth the Wooll. In the ſtraining, boil the white Berries of Miſtle-toe, or for want of them, of any other aſtringent Tree, ʒ vj.
Earth-worms waſh'd in Wine ʒ iiij. till they are diſſolv'd.
Then ſtrain and preſs them out, boil the ſtrain'd and preſs'd liquor with Lytharge of Gold prepar'd, Oyls of Quinces, and Whortle-berries, *an.* ℔ j. over a gentle fire in a Copper-Pan, ſtirring them continually to the thickneſs of an Emplaſter.
In theſe melt, being cut into little pieces,
Yellow Wax, ℔ j.
Black Pitch,
Roſine,

Terebinthinæ,

Terebinthinæ, an. ℔ ß.	Turpentine, *an.* ℔ ß.
Deinde addantur,	Then take the Pan off the fire, and add,
Gummi Ammoniaci,	Gumm-Ammoniac and Galbanum diſſolv'd in Vinegar, ſtrain'd and thick'nd,
Galbani,	and incorporated with the Turpentine,
Myrrhæ,	Myrrh,
Thuris,	Frankincenſe,
Maſtiches, &	Maſtich, and
Sanguinis humani vel Porcini exſiccati, an. ℥ *iiij.*	Mans or Hogs blood dry'd, *an.* ℥ iiij.
Ariſtolochiæ longæ & rotundæ,	Birth-wort long and round,
Symphyti majoris & minoris	Cumfrey greater and leſſer,
Gallarum,	Galls,
Gypſi,	Plaiſter,
Boli Armenæ, &	Bole-Armenian, and
Mumiæ, an. ℥ *iij.*	Mummy, *an.* ℥ iij.

Fiat Emplaſtrum.

After the Gums mix the Powders of Man's Blood, Birthwort, Cumfry, Galls, Mummy, Plaiſter, and Bole-Armenian ſifted through a Silk-ſieve; and laſtly, the Myrrh, Frankincenſe, and Maſtich pulveriz'd apart, and incorporate the whole well together, by which means the Plaiſter will be of a due conſiſtence, and keep long.

The non-plus which the moſt part of Apothecaries are at in the Compoſition of this Plaiſter, by reaſon of the irregular Receipts, and ill-proportion'd quantities in moſt Diſpenſatories, requiring ſomething better order'd, I could not forbear to give the ſatisfaction of this Receipt and Preparation.

This Plaiſter, taking its name from the uſe, is to be apply'd to the part, after the Inteſtine is put up, and muſt be kept on with a Truſs. By fortifying the part relax'd, it cauſes the Inteſtine to ſtay in its place; and by continuing it, the parts reſume entirely their natural ſtrength. It is alſo of great uſe in Fractures and Diſlocations.

You may alſo prepare an Emplaſter againſt Burſtneſs with leſs Ingredients, more aſtringent, and more effectual.

Emplaſtrum aliud contra *Herniam.*

℞. *Exuvias Anguillarum non ſalitas, & in aqua Calcis Lotas, quantum libuerit. Coque in Lixivio donec diſſolvantur, & craſſeſcant inſtar glutinis.*

Poſtea accipe,

Glutinis illius trajecti, ℥ *iiij.*	
Lapidis Hæmatitis,	
Sacchari Saturni,	
Stanni Uſti, an. ℥ *iij.*	
Gummi Ammoniaci in aceto acerrimo ſoluti, trajecti, & ſpiſſati, ℥ *ii* ß.	
Olei Myrrhæ ſtillatitii, ℥ ß.	

Another Plaiſter againſt Burſtneſs.

℞. Eel-skins never ſalted, newly flea'd, and waſh'd in Lime-water, what you pleaſe. Boil them over a gentle fire, in clean Lye of ordinary Cinders, till they diſſolve and grow thick like Glue.

Then take,

Of this Glue being ſtrain'd,	℥ iiij.
Blood-ſtone,	
Saccharum Saturni,	
Burnt Pewter, *an.*	℥ iij.
Gum-Ammoniac diſſolv'd in ſtrong Vinegar, ſtrain'd and thick'nd,	℥ ii ß.
Oyl of Myrrh diſtill'd,	℥ ß.

Put all theſe together, with the Glue finely powder'd, into a glaz'd Earthen-pot, and boil them all together over a very gentle fire, ſtirring them continually, till they have acquir'd the conſiſtence of an Emplaſter, and adding at laſt the diſtill'd Oyl of Myrrh.

This Plaiſter is one of the beſt that ever was invented to cure a Rupture, apply'd like the former.

Emplaſtrum

Emplastrum pro Fracturis & Luxatione Ossium.

℞. *Radicum Altheæ mundatarum & minutim incisarum,* ℥ *vj.*
Aquæ Fontanæ, ℔ *iiij.*
Infundantur horis viginti quatuor super ignem exiguâm, sæpius agitando spatulâ ligneâ, deinde lento igne coquantur ad Muscilaginis sufficientem spissitatem; colentur & fortiter exprimantur, serveturque Muscilago. Interea,
℞. *Radicum & foliorum Fraxini, & Consolidæ majoris,*
Baccarum & foliorum Myrti, &
Foliorum salicis, an. M *j.*
Contusa omnia coquantur igne lento, ad dimidiæ partis consumptionem in
Aquæ Extinctionis Fabrorum, &
Vini austeri sub finem additi, an. ℔ *ij.*

Postea colentur & exprimantur, deinde

℞. *Lithargyri auri, &*
Argenti præparatorum, an. ℥ *viij.*
Minii, ℥ *ij.*
Olei Rosati, &
Myrtini, &
Sævi Hircini, an. ℔ *j.*

Melt the Goats-Suet among the Oyls in a large Plaister-Pan, and having incorporated them first cold, with the Minium and Litharges powdered, and afterwards with the Decoction and Muscilages, boyl them over a moderate Fire, stirring them continually with a large Wooden-Spatula to the thickness of Emplaisters.

Tunc

℞. *Ceræ Citrinæ,* ℥ *viij.*
Terebinthinæ, ℥ *iiij.*

Deinde permisceantur,

℞. *Boli Armenæ,*
Terræ Sigillatæ,
Olibani,
Myrrhæ, &
Mastiches subtiliter pulveratorum, an. ℥ *iij.*

A Plaister for Fractures and Dislocations of Bones.

℞. Roots of Marsh-Mallows cleans'd and cut very small, ℥ vj.
Fountain-water, ℔ iiij.
Infuse them 24 hours over a soft fire, stirring them often with a wood'n-Spatula: Then boil them over a gentle fire, to the due thickness of a Muscilage: Then strain and press out the Muscilage with a good strength, and set it aside. Then
℞, Roots and leaves of Ash, and
Greater Cumfrey,
Berries and leaves of Myrtle, and
Leaves of Willow, *an.* M j.
Bruise them all together, and boil them to the consumption of the half part in
Smiths water, and
Sour Wine added toward the end, *an.* ℔ ij.
After that strain and press them out; then
℞. Litharge of Gold, and
Silver prepar'd, *an.* ℥ viij.
Minium, ℥ ij.
Oyls of Roses, and
Myrtles, and
Goats-Suet, *an.* ℔ j.

Melt the Goats-Suet among the Oyls in a large Plaister-Pan, and having incorporated them first cold, with the Minium and Litharges powdered, and afterwards with the Decoction and Muscilages, boyl them over a moderate Fire, stirring them continually with a large Wooden-Spatula to the thickness of Emplaisters.

Then

℞. Yellow-Wax, ℥ viij.
Turpentine, ℥ iiij.

Melt the Wax in the Composition, and taking the Pan from the Fire, when it is somewhat cold, mix the Turpentine.

Lastly add to the whole,

℞. Bole Armenian,
Seal'd-Earth,
Olibanum,
Myrrh, and
Mastich all very finely powdred, *an.* ℥ iij.

Incorporate them well together and the Plaister is made.

This Plaister is one of those that are ill-proportion'd in the Prescriptions of the Ancients. For seven Ounces, two Drams of *Minium* and *Litharge* did not make the just proportion for eighteen Ounces of Oyls or Suet prescrib'd for this Emplaister: Besides that they made use of too great a quantity of Muscilages, and Decoction in the boying of the same Ingredients. Which forc'd me to seek for a true proportion of Medicaments, and to give a more exact Prescription then that of the Ancients.

The name of this Emplaister denotes the Virtues and Uses. It fortifies the parts by its astriction, prevents the flowing of humours, and causes the growth and perfection of the callous flesh requisite in Fractures.

Emplaſtrum de Ranis cum Mercurio.

℞. *Ranas Viventes,* N° *xij.*
Lumbricorum terreſtrium purgatorum, ℥ *iiij.*
Radicum Ebuli, &
Enulæ campanæ, an. ℥ *iij.*
Schœnanthi,
Stœchadis Arabicæ, &
Matricariæ, an. *Mj.*
Aceti Fortis,
Vini auſteri, an. ℔ *ij.*

Plaiſter of Frogs with Mercury.

℞. Live Frogs, N° xij.
Earth-worms purg'd, ℥ iiij.
Roots of Dwarf-Elder, and
Elecampane, *an.* ℥ iij.
Camels Hay,
Arabian Stœchas, and
Fetherfew, *an.* M j.
Strong Vinegar,
Auſtere Wine, *an.* ℔ ij.

Bruiſe the Roots of the Dwarf-Elder and Elecampane, and put them into a glaz'd Earthen-pot with the Vinegar and Wine, and after you have let them boil a while, put in the live-Frogs, and then the Worms. Cover the Pot, and boil the whole over a moderate fire for half an hour: Then having ſtrain'd and preſs'd out the whole,

℞. *Lithargyri auri præparati,* ℔ *ij.*
Pinguedinis Porci, &
Vituli, an. ℥ *ix.*
Oleorum Camomillæ,
Anethi,
Liliorum,
Laurini, &
Spicæ, per infuſ. & decoct. parat. an. ℔ ß.

℞. Litharge of Gold prepar'd, ℔ ij.
Barrows fat, and
Calves fat, *an.* ℥ ix.
Oyls of Camomile,
Dill,
Lillies,
Laurel, and
Spike, prepar'd by Infuſion and decoction, *an.* ℔ ß.

Melt the Greaſes in the Oyls, and incorporate the Litharge with this mixture cold; and then with the Decoction reſerv'd, in a Plaiſter-pan; then boil them over a moderate fire, ſtirring them continually with a wood'n Spatula, till the moiſture being almoſt all conſum'd, the whole have acquir'd the thickneſs of ordinary Emplaſters.

In illis deinde liquefiant,

Cereæ Citrinæ, ℔ *j.*
Axungiæ Viperinæ, ℥ *iiij.*

Then melt therein,

Yellow Wax, ℔ j.
Vipers fat, ℥ iiij.

Melt the Wax firſt, and then the Vipers Greaſe, and when the whole is half cold,

℞. *Pulveris Olibani,* ℥ *iij.*
Euphorbii, ℥ *i* ß.
Croci, ℥ ß.
Mercurii vivi, ℔ *j.*
Terebinthinæ, &
Storacis liquidæ, an. ℥ *iiij.*

℞. Powder of Olibanum, ℥ iij.
Euphorbium, ℥ i ß.
Saffron, ℥ ß.
Quick-ſilver, ℔ j.
Turpentine, and
Liquid Storax, *an.* ℥ iiij.

When you have mix'd the Powders, immediately after put in the Quick-ſilver, having well united it in a great brazen Mortar with the Turpentine and Storax, and mix the whole exactly together.

The Opinions of Authors are very various, as well concerning the quantities of the Ingredients, as the preparation of the Plaiſter. But I ſuppoſe this preſcription and preparation will give ſatisfaction, without farther inſiſting upon the bad proceeding of the Ancients.

Some of our Moderns preſcribe, that the Mercury ſhould be diſſolv'd in *Aqua Fortis*; and that the moiſture of it ſhould be evaporated with ſome part of the Vipers-Greaſe, and Oyl of Lillies. But that cannot be done, but that the Mercury would retain the moſt part of the ſharp and corroding parts of the *Aqua Fortis*, which would then come to be mix'd in the Plaiſter; which makes me believe, that there is no Rational Apothecary will practiſe that, ſince the Quickſilver may be perfectly united with the maſs of the Plaiſter, according to my method. This

This Plaister is succesfully us'd to asswage the pains of the Shoulders, Arms, Thighs, Legs, and all the parts of the Body, that proceed from any Venereal Venom: For by fortifying the parts, it draws the venom outwards, by turning it into a kind of sweat, and raising an easie flux. It also dissolves Nodes, and venereal Tumours that happen upon any part of the body: It is also laid to Wolfs, and other cold Tumours, either alone, or mix'd with other Plaisters, tending to the same effect.

Emplastrum Stipticum.

℞. *Minii,*
Lithargyri Auri, &
Argenti, &
Lapis Calaminaris, an. ℔ ß.
Olei Lini, &
Olivarum, an. ℔ *i* ß.
Laurini, ℔ *j.*
Decocti Aristolochiæ,
Longæ & rotundæ, ℔ *iij.*

Incorporate the Litharges, Minium, and Lapis Calaminaris, *with the Oyls, cold, in the first place, and then with the Decoction in a Plaister-pan, and boil them together over a moderate fire, stirring them continually to the ordinary consistence of Emplasters.*

Deinde adde,

Ceræ Flavæ, &
Colophoniæ, an. ℔ *j.*
Terebinthinæ, &
Sandaracæ, an. ℔ ß.
Opoponacis,
Sagapeni,
Galbani,
Ammoniaci,
Bdellii, an. ʒ *iij.*
Succini,
Olibani,
Myrrhæ,
Aloes,
Aristolochiæ, longæ & rotundæ, an. ʒ *i* ß.
Mumiæ Transmarinæ,
Magnetis,
Hæmatitis,
Coralli, albi & rubri,
Matris Perlarum,
Sanguinis Draconis,
Terræ sigillatæ,
Vitrioli Albi, an. ʒ *j.*
Florum Antimonii, &
Croci Martis, an. ʒ ß.
Camphoræ, ʒ *j.*

First melt the Wax and Colophony; then taking the Pan from off the fire, add the Opoponax, Sagapen, Galbanum, Ammoniac, and Bdellium dissolv'd in Vinegar, strain'd and thick'nd, and incorporated with the Turpentine; and the whole being half cold, mix first the fine Powders of Birthwort, Mummy, Magnet, Blood-stone, Corals, Mother of Pearl, Seal'd Earth, Vitriol, and Crocus Martis; and lastly, those of the Sandarach, Amber, Olibanum, Myrrh, Aloes, Dragons blood, and Camphire, and incorporate the whole exactly.

A Stiptic Plaister.

℞. Minium,
Litharge of Gold, and
Silver, and
Lapis Calaminaris, *an.* ℔ ß.
Linseed-Oyl, and
Oyl of Olives, *an.* ℔ i ß.
Oyl of Laurel, ℔ j.
Decoction of Birthwort,
Long and round, ℔ iij.

Afterwards add,

Yellow Wax, and
Colophony, *an.* ℔ j.
Turpentine, and
Sandarach, *an.* ℔ ß.
Opoponax,
Sagapen,
Galbanum,
Ammoniac,
Bdellium, *an.* ʒ iij.
Amber,
Olibanum,
Myrrh,
Aloes,
Birthwort, long and round, *an.* ʒ i ß.
Beyond-Sea Mummy,
Magnet,
Blood-stone,
Coral, white and red,
Mother of Pearls,
Dragons blood,
Seal'd Earth,
White Vitriol, *an.* ʒ j.
Flowers of Antimony,
Crocus Martis, *an.* ʒ ß.
Camphire, ʒ j.

This Plaister is recommended for the cure of all sorts of Ulcers, in whatsoever part of the body; for it cleanses, dries, and quickly consolidates them, preserving them

from putrefaction, and hindring all excreſcence of ill fleſh. It is proper to heal cuts and contuſions of the Nerves: It draws bits of Iron, Wood, Lead, or any other ſuch kind of ſubſtances, out of wounds: It is good againſt the bitings and ſtingings of all ſorts of venomous Animals: It ripens all ſorts of Apoſtemes; cleanſes and heals all ſorts of Ulcers, as well old as new; diſſolves and heals the ſwellings of the Kings-Evil, aſſwages the pains of wounds and bruiſes, and keeps for ſeveral years, being well prepar'd.

Emplaſtrum ad Pedis Equini Punctionem.

℞. *Ceræ Citrinæ*, ℥ viij.
Picis Albæ,
Gummi Elemmi,
Terebinthinæ Venetæ, an. ℥ iiij.
Cinabaris vulgaris ſubtiliſſimè pulveratæ,
Sanguinis Draconis,
Ariſtolochiæ, longæ & rotundæ, an. ℥ ß.

A Plaiſter to cure the pricking of a Horſes Foot.

℞. Yellow Wax, ℥ viij.
White Pitch,
Gum-Elemmi,
Venice-Turpentine, *an.* ℥ iiij.
Vulgar Cinabar very finely pulveriz'd,
Dragons blood,
Birthwort, long and round, *an.* ℥ ß.

After you have bruis'd the Birthwort-roots in a Marble-Mortar, and pulveriz'd the Dragons blood and Cinabar apart, melt the yellow Wax over a ſoft fire, with the white Pitch, Elemmi, and Turpentine; ſtrain them through a Cloth, and when the Ingredients are half cold, incorporate the Dragons blood and Cinabar, and unite the whole well together.

This Plaiſter is a certain cure for the pricking of Horſes Feet newly made in Shooing, pouring a little of the Plaiſter melted into the hole; for then you may Shooe the Horſe again, without any fear of any Apoſteme or Ulcer.

Emplaſtrum Veſicatorium.

℞. *Cantharidum ſine alis & capitibus pulveratarum*, ℥ ß.
Picis Albæ, &
Terebinthinæ, an. ℥ ij.
Myrrhæ, &
Maſtiches ſubtiliter pulveratorum, an. ℥ ß.

A Veſicatory Plaiſter.

℞. Cantharides without wings or heads powder'd, ℥ ß.
White Pitch, and
Turpentine, *an.* ℥ ij.
Myrrh, and
Maſtich very finely pulveriz'd, *an.* ℥ ß.

Beat the Cantharides apart, as alſo the Myrrh, and the Maſtich, and having mix'd the Powders, gently melt the Wax, white Pitch, and Turpentine; and when the ſubſtances are half cold, incorporate the Powders very well.

This Plaiſter is call'd the Veſicatory, or Bliſter-Plaiſter, becauſe that being laid upon any part of the body, it raiſes the skin, and makes Bladders full of ſeroſity. It works in two or three hours, or ſooner, according to the hardneſs or ſoftneſs of the Skin: Then open the Bladders, and anoint the part with freſh Butter, to keep the Pores open, to let out the ſeroſities which the Plaiſter has drawn together.

This Plaiſter is not only us'd in Lethargies, Apoplexies, and other diſeaſes of the Brain, being apply'd to the Shoulders, or brawny parts of the Legs and Arms, and to the ſutures of the Brain; but it is us'd alſo in diſtempers of the Eyes and Teeth, apply'd behind the Ears.

You may alſo make a very effectual Bliſter-Plaiſter, by incorporating the Powder of Cantharides with Crums of Bread moiſten'd in Vinegar, and ſpreading this mixture upon Leather. But this Plaiſter is not to be us'd but upon occaſion; for being kept, it grows as hard as a ſtone, and the Cantharides loſe their vertue.

Emplaſtrum Ceræ cum Cymino.

℞. *Ceræ Flavæ*, ℔ ij.
Reſinæ, &
Olei Roſati, an. ℥ v.

A Plaiſter of Wax with Cumin.

℞. Yellow Wax, ℔ ij.
Roſin, and
Oyl of Roſes, *an.* ℥ v.

Terebinthinæ

Terebinthinæ Venetæ,		Venice-Turpentine,	
Pulveris Cumini, &		Powder of Cumin, and	
Boli Armenæ, an.	℥ iij.	Bole-Armenian, *an.*	℥ iij.
Florum Cumomillæ,		Flowers of Camomile,	
Meliloti, &		Melilot, and	
Roſarum Rubrarum,		Red Roſes,	
Myrtillorum, &		Whortle-berries, and	
Sanguinis Draconis, an.	℥ j.	Dragons blood, *an.*	℥ j.

Having beaten together in a large Braſs Mortar the Cumin-ſeed, Whortle-berries, Roſes, Camomile, and Melilot, and the Bole-Armenian, and the Dragons blood apart, and paſs'd the whole through a Silk-ſieve, melt the Wax and Roſin over a ſoft fire, among the Oyl of Roſes; then add the Turpentine, and let the Ingredients cool; and when the Compoſition is half cold, mix the Powders, and incorporate the whole exactly.

Though this Plaiſter be not much in uſe, yet are the vertues of it ne're the leſs: For it is very proper to diſſipate Contuſions, and Flegmatic Tumours: It aſſwages the pains of the Sides, and Sciatic Gouts: It ſtrengthens the parts in Fractures and Diſlocations of the Bones, and draws forth the ſeroſities through the Pores. It is alſo very proper to aſſwage the pains of the Liver, Spleen and Stomach, from whence it expels Wind, and diſſolves Noxious Subſtances.

Emplaſtrum de Alabaſtro.

The Alablaſter Plaiſter.

℞. *Maſſæ Emplaſtri de*		℞. Of the Maſs of Plaiſter of	
Ceruſſa, &		White-lead, and	
Ceræ Albæ, an.	℥ viij.	Yellow Wax, *an.*	℥ viij.
Alabaſtri præparati,	℥ ij.	Alablaſter prepar'd,	℥ ij.
Succini præparati,		Amber prepar'd,	
Sanguinis Draconis,		Dragons blood,	
Coralli Rubri,		Red Coral,	
Cranii Humani, &		Man's Scull, and	
Cornu Cervi uſtorum, an.	℥ j.	Burnt Harts-horn, *an.*	℥ j.
Terebinthinæ, &		Turpentine, and	
Styracis Liquidæ, an.	℥ i ß.	Liquid Storax, *an.*	℥ i ß.

Having calcin'd the Man's Scull and Harts-horn, grind them together upon Porphyry, with red Coral and Alablaſter; bruiſe the Amber a-part, and the Dragons blood; and after that, having melted the Plaiſter of Ceruſe with the white Wax, and having added thereto the Turpentine and Liquid Storax, mix the Powders, and incorporate them well together.

This Emplaſter is very much recommended againſt Abortion of Great-belly'd Women, whence it may be call'd, *Emplaſtrum ad fœtum retinendum.* For it ſtrengthens the Ligaments of the Matrix, and the parts to which they are fix'd. This Plaiſter is to be ſpread ſo that it may cover the Loyns, and the *Os Sacrum*, and may be worn and renew'd as often as need requires.

You may alſo lay another Plaiſter upon the Navel.

Emplaſtrum de Sperma-Ceti.

Plaiſter of Sperma-Ceti.

℞. *Ceræ Albæ,*	℥ viij.	℞. White Wax,	℥ viij.
Spermatis Ceti,	℥ iiij.	Sperma-Ceti,	℥ iiij.
Gummi Ammoniaci in aceto ſoluti, trajecti		Gum-Ammoniac diſſolv'd in Vinegar,	
& ſpiſſati,	℥ ij.	ſtrain'd and thicken'd,	℥ ij.

Having diſſolv'd the Gum-Ammoniac in Vinegar, ſtrain'd and thicken'd it, melt the white Wax in a Silver Spoon by the heat of a *Balneum Mariæ*, between luke-warm and boiling-hot; after that, having added and melted the Sperma-Ceti, and mix'd it with the Gum-Ammoniac, the Plaiſter is made. You may, in reſpect to the nicer ſort of Ladies, leave out the Gum-Ammoniac, becauſe of the ill ſcent, and inſtead thereof

put

put in an Ounce of the preſt Oyl of the cold Seeds, which will be much to the ſame effect.

This Plaiſter is chiefly for the conveniency of Women newly brought to Bed, that cannot give their Children Suck: For being apply'd to the Breaſts, for ſome time it carries away the Milk, aſſwages the pains that are caus'd by it, and diſſolves the curdlings and hardneſſes thereof, as well as thoſe which proceed from the Kings-Evil.

Emplaſtrum ad Fontinellas.

℞. *Olei Roſati, &*
Aquæ Roſarum, an. ℔ *ij.*
Ceruſæ Venetæ, &
Lithargyri Auri præparati, an. ℥ *viij.*
Coquantur ex arte in Emplaſtrum:
Deinde adde,
Ceræ Albæ, ℥ *vj.*

A Plaiſter for Iſſues.

℞. Oyl of Roſes, and
Roſe-water, *an.* ℔ ij.
Venetian Ceruſe, and
Litharge of Gold prepar'd, *an.* ℥ viij.
Boil them to the thickneſs of an Emplaſter: Then add,
White Wax, ℥ vj.

Melt the white Wax cut into pieces, and incorporate it exactly with the reſt.

This Plaiſter has no ill ſmell, and does not ſtick very cloſe: One Sparadrap, or Plaiſter, will ſerve ſeveral days, being wip'd Morning and Evening, and laid on again. It may be put alſo to the ſame uſes as Plaiſter of Ceruſe.

Emplaſtrum ad Ganglia.

℞. *Radicum & Foliorum recentium Bardanæ,*
Cicutæ,
Leviſtici,
Angelicæ,
Cucumeris Agreſtis,
Scrofulariæ,
Filipendulæ,
Illecebræ,
Gratiolæ, &
Chelidonii major. an. ℥ *i* ß.
Purgata & contuſa omnia in
Succorum Cicutæ, &
Chelidonii majoris, an. ℔ *ij* ß.
Lento igne coquantur ad dimidiæ partis conſumptionem, deinde colentur & exprimantur. Expreſſio vero cum

Oleo Lumbricorum, ℔ *iiij.*
Lithargyri auri ℔ *ij. ex arte coquatur, aſſidue movendo ſpatula lignea ad Emplaſtri ſpiſſitatem.*

In illis deinde liquefiant,
Ceræ Citrinæ, &
Picis Albæ, an. ℔ *j.*
Terebinthinæ, &
Styracis Liquidæ, an. ℔ ß.

Ab igne remotis permiſce
Galbani,
Ammoniaci,
Bdellii,
Opoponacis, &

A Plaiſter againſt all ſorts of Tumours.

℞. Freſh-gather'd roots and leaves of Burdock,
Hemlock,
Lovage,
Angelica,
Wild Cucumber,
Figwort,
Dropwort,
Wall-pepper,
Hedg-Hyſop, and
Bigger Celandine, *an.* ℥ i ß.
Having cleans'd and bruis'd them all, in
Juices of Hemlock, and
Bigger Celandine, *an.* ℔ ij ß.
Boil them over a gentle fire, to the conſumption of the third part; then ſtrain and preſs them out. Then boil the Expreſſion with
Oyl of Worms, ℔ iiij.
Litharge of Gold ℔ ij. incorporated cold with the Oyl of Worms, ſtirring them continually with a wood'n Spatula, to the conſiſtence of an Emplaſter.
Then melt therein,
Yellow Wax, and
White Pitch, *an.* ℔ j.
Turpentine, and
Liquid Storax, ℔ ß.

When they are off the fire, mix
Galbanum,
Ammoniac,
Bdellium,
Opoponax, and

Sagapeni

Sagapeni in aceto diſſolut. traject. ſpiſſatorum & portione Emplaſtri ſeorſum prius exceptorum, an. ℥ ij.

Deinde

℞. *Radicum Ireos Florentiæ,*
Sigilli Beatæ Mariæ,
Cyclamini,
Coronæ Imperialis, &
Serpentariæ,
Seminum Angelicæ,
Pæoniæ Maris,
Naſturtii,
Euphorbii,
Olibani,
Maſtiches,
Tacamahaccæ odoratæ, &
Sulphuris vivi, an. ℥ i ß.
Camphoræ, ℥ ß.

Sagapen diſſolv'd in Vinegar, ſtrain'd and thick'nd, and incorporated with the Turpentine and Liquid Storax a-part, as before, *an.* ℥ ij.

Then

℞. Roots of Florence-Orrice,
Wild Ellebore,
Sow-bread,
Crown-Imperial, and
Dragon-wort,
Seeds of Angelica,
Male-Piony,
Creſſes,
Euphorbium,
Olibanum,
Maſtich,
Sweet Tacamahacca, and
Quickſilver, *an.* ℥ i ß.
Camphire, ℥ ß.

Mix the Roots and Seeds finely powder'd firſt, and preſently after the Quickſilver, Gums, and Camphire powder'd a-part; and in this order incorporate the Drugs exactly together, and the Plaiſter is made.

The vertues of this Plaiſter are to digeſt and diſſolve all ſorts of unnatural ſubſtances, eſpecially thoſe which are cold, and hard to be diſſolv'd, gather'd together under the skin in the external parts of the body, ſuch as are Wolfs, the Kings-Evil, Nodes, and Ulcerous Calloſities: For which purpoſes there is hardly to be found a Plaiſter of greater efficacy then this; as alſo for all ſorts of Tumours and Subſtances gather'd together in the external parts, from what cauſe ſoever proceeding.

Emplaſtrum aliud ad Ganglia.

℞. *Gummi Ammoniaci,*
Galbani,
Opopanacis, &
Sagapeni in aceto ſolutorum, colatorum & ſpiſſatorum, & Myrrhæ electæ ſubtiliter pulveratæ, an. ℥ iij.
Olei Laurini, &
Spiritus Vini, an. ℥ j.
Sulphuris Vivi,
Salis Ammoniaci, &
Vitrioli Romani, an. ℥ ß.
Euphorbii, ℥ ij.

Another Plaiſter for the ſame.

℞. Gum-Ammoniac,
Galbanum,
Opoponax,
Sagapen diſſolv'd in Vinegar, ſtrain'd and thick'nd, and choice Myrrh very finely pulveriz'd, *an.* ℥ iij.
Oyl of Laurel, and
Spirit of Wine, *an.* ℥ j.
Quick-ſilver,
Salt-Ammoniac, and
Roman Vitriol, *an.* ℥ ß.
Euphorbium, ℥ ij.

After you have diſſolv'd, ſtrain'd and thick'nd the Gums to the conſiſtence of an Emplaſter, and taken them from the fire, add to them the Oyl of Laurel, and Spirit of Wine, and after that the Myrrh, Quick-ſilver, Salt-Ammoniac, Roman Vitriol, and Euphorbium finely pulveriz'd, and incorporate them all exactly.

Though this Plaiſter conſiſts of leſs Ingredients then the former, yet the vertue is no leſs to produce the ſame effects.

I might here inſert ſeveral other preparations of Emplaſters, did I not believe I had produc'd enough, as well for the full inſtruction of young Beginners, as to give ſatisfaction in reference to all thoſe purpoſes for which Emplaſters were provided.

CHAP.

CHAP. VII.

Of Cataplaſmes.

THough it be not the Cuſtom to make any proviſion of Cataplaſms in Shops, and that they are only prepar'd when need requires, by reaſon of their ſuperfluous moiſture which ſoon corrupts them; yet the neceſſity which there is of them ſometimes, has oblig'd me to afford them a Chapter.

The name of *Cataplaſm* is given to an External Medicament, in conſiſtence not unlike that of *Cerats*; receiving into its Compoſition divers Liquors and different parts of Plants, Animals, and Minerals, ſome liquid, others drye, and many times Oyles, Oyntments, and other both external and internal Compoſitions; according to the difference of the Infirmities and purpoſes, for which this ſort of Medicine is prepar'd. The principal Office of Cataplaſms is to appeaſe pains, to ſoften, diſſolve, diſcuſs, cauſe tranſpiration, and ſuppurate matters gather'd together in the external parts of the body.

The moſt common Cataplaſm, and moſt in uſe to aſſwage pains, diſſolve and diſſipate Tumours newly come, eſpecially Flegmatic, is this that follows.

℞. *Micæ panis Albi recentis,*	℥ *iiij.*	℞. Crum of new White-bread,	℥ iiij.
Lactis recenter mulcti,	℔ *j.*	Milk new from the Cow,	℔ j.

Fry them over a gentle Fire in a ſmall Frying-pan, ſtirring them often with a Wood'n-Spatula till they are as thick as a Poulteſs; then taking them off the Fire,

Adde		*Add*	
Vitellos Ovorum,	N° *iij.*	Yolks of Eggs,	N° iij.
Olei Roſati,	℥ *j.*	Oyls of Roſes,	℥ j.
Croci ſubtiliter pulverat.	℥ j.	Saffron finely beaten,	℥ j.

Mix the Yolks of Eggs, the Oyl of Roſes, and the Saffron with the Poulteſs, and the Cataplaſm is made.

Si major dolorum ſedatio requiratur,	If a more powerful aſſwagement of pain be deſir'd, mix therewith
Extract. Liquidioris Opii, ℥ *ij. permiſceantur.*	Liquid Extract of Opium, ℥ ij.

You may alſo prepare a Cataplaſm to ſoften and bring to ſuppuration ſuch matters as are diſpos'd thereto, proceeding this way.

℞. *Radicum Liliorum, &*		℞. Roots of Lillies, and	
Althææ minutim inciſarum, an.	℥ *iij.*	Marſh-Mallows, cut very ſmall, *an.*	℥ iij.
Foliorum Malvæ,		Leaves of Mallows,	
Althææ,		Marſh-Mallows,	
Senecionis,		Groundſell,	
Violariæ,		March-Violets,	
Parietariæ,		Pellitory,	
Brancæ Urſinæ, an.	M. j.	Brank-Urſin, *an.*	M. j.

Boil the Roots firſt in ſix Pints of Fountain-Water; ſometime after put in the Leaves, and continue boiling them, till they are perfectly tender. Strain the Decoction, and beat the ſettlement in a Marble-mortar with a Wood'n-Peſtle, and paſs the Pulp through a Hair-ſieve reverſt.

Colaturam & Pultem ſecretam, cum	The Straining and Pulp put into a ſmall Frying-pan, with
Farinæ Lini, &	Meal of Linſeed, and
Fenugræci, &	Fengreek, and

Olei

Olei Liliorum, an. ℥ iij.	Oyl of Lillies, *an.* ℥ iij.
Coque igne lento, ſæpius agitando ad debitam ſpiſſitudinem.	Boil them all together over a gentle fire, ſtirring them often, to a due conſiſtence.

You may alſo prepare a Cataplaſm proper to cut, digeſt, diſſolve, diſcuſs, and cauſe tranſpiration, according to the following Receipt.

℞. *Radicum Cyclaminis,*	℞. Roots of Sow-bread,
Brioniæ,	Briony,
Cucumeris ſilveſtris, an. ℥ ij.	Wild Cucumbers, *an.* ℥ j.
Foliorum Abſinthii,	Leaves of Wormwood,
Mercurialis, an. M. ij.	Herb Mercury, *an.* M. ij.
Florum Camomillæ, &	Flowers of Camomile, and
Meliloti, an. M. j.	Melilot, *an.* M. j.

Boil the Roots firſt, then the Leaves in four Pints of common Water, adding at length two Pints of White-wine, till they are ſufficiently ſoft. Strain them, and paſs the ſediment beaten through a Hair-ſieve. To the Decoction and Poultes add

Farinæ Fenugræci, &	Meal of Fenugreek,
Lupinorum,	Lupines,
Pulveris Abſinthii,	Powder of Wormwood,
Cumini,	Cumin,
Feniculi, &	Fennel, and
Baccarum Lauri, an. ℥ j.	Laurel-berries, *an.* ℥ j.
Fiat Cataplaſma.	Mix them into a Cataplaſm.

The Preparation of this Cataplaſm being like the former, I have not been particular in it. And I believe theſe three Preparations to be ſufficient for further inſtruction.

CHAP. VIII.

Of Fomentations, Baths, and Half-Baths.

THE Diſtemperatures which happen not only to the parts, but alſo to the whole habit of the body, and the troubleſome pains that Wind, Defluxions, Fermentations, Worms, the Stone, Contuſions, Fractures, Diſlocations, and many other accidents cauſe to ſeveral parts of the body, have begot the uſe of Fomentations, Baths, and Half-Baths, which are external liquid Remedies, ſometimes plain, ſometimes compos'd of ſeveral Medicaments.

The name of Local-Baths is giv'n to Fomentations, becauſe they are generally apply'd to the part affected; and work the ſame effects upon one, as Baths and half-Baths might do upon ſeveral parts at a time. And though Baths and half-Baths are often us'd for the eaſe and cure of Diſtempers that fall upon ſingle parts of the Body, yet the good effects of Fomentations, their eaſineſs, and the little trouble there is in them, are the reaſons that they are more frequently made uſe of then Baths or half-Baths, which require more room, bigger Veſſels and more trouble. For which cauſe they are never us'd, but where Fomentations have not ſucceeded, or where the exceſs and nature of the Diſeaſe require more effectual Remedies then Fomentations.

There may be prepar'd as many ſorts of Fomentations as there are diverſity of Diſtempers. The Roots, Leaves, Flowers and Seeds of moſt Plants, boyl'd in Water, or in other proper Liquors are the uſual foundation, and ſubſtance of Fomentations. Certain Minerals and parts of Plants, particularly Salts and Greaſes, not to mention Oyls that may be mix'd with them, are frequently added, and oft-times make a part of the Liquor neceſſary for the Fomentation.

I ſhall only give two or three examples which may ſuffice for the preparation of all others that may be preſcrib'd.

Fotus Antipleuriticus.

℞. *Radicum Altheæ, &*
Liliorum, an ℥ *iiij.*
Foliorum Malvæ,
Altheæ,
Violariæ,
Senecionis,
Brancæ Urſinæ, an. *Mij.*
Florum Camomillæ,
Meliloti, an. *Mj.*
Seminum integrorum Lini, &
Fenugræci, an. ℥ *j.*

A Fomentation againſt the Pleuriſie.

℞. Roots of Marſh-Mallows,
Lillies, *an.* ℥ iiij.
Leaves of Mallows,
Marſh-Mallows,
March-Violets,
Ground-ſell,
Brankurſin, *an.* M ij.
Flowers of Camomile, and
Melilot, *an.* M j.
Whole Seeds of Line, and
Fengreek, *an.* ℥ j.

After you have well cut, and mix'd the Roots and Leaves with the Flowers and Seeds, and put them into two Bags of fine Linnen, both of an equal bigneſs, and large enough to cover the part affected, and quilted them both, boyl them in ten pints of Common-water till the Subſtances are very tender; then take off the Decoction from the Fire, and when it is half cold, take out the two Bags, and preſſing them between your hands, to drain out the Water, apply one Bag warm to the pain, and cover it with a double Napkin; and when it has lain a quarter of an hour apply the other in its place, and do thus from quarter to quarter of an hour as often as there is occaſion.

After you have ſo done, wipe the part and anoint it with Oyl of Lillies, or Ointment of Althæa, laying a Linnen-cloth upon it, and covering it with a double Napkin well-warm'd. You may alſo repeat the ſame applications as often as need requires.

Fotus Antinephriticus.

℞. *Radicum Raphani Hortenſis,*
Foliorum Naſturtii Aquatici,
Becabungæ,
Berulæ,
Parietariæ, &
Violariæ, an. *Mij.*
Axungiæ Viperinæ, ℥ *ij.*
Seminum Lini, &
Fenugræci, an. ℥ *j.*

An Anti-Nephritic Fomentation.

℞. Roots of Garden-Radiſhes,
Leaves of Water-Creſſes,
Brooklime.
Water-Pimpernel,
Pellitory,
March-Violets, *an.* M ij.
Vipers Fat, ℥ ij.
Linſeed, and
Seed of Fengreek, ℥ j.

Having cut the Roots and Herbs, and mix'd them with the Seeds, put them into two Bags, and proceed in every thing elſe as before. Otherwiſe you may dip Sponges or Wool in the Decoction, and apply it to the part affected.

Fotus Stomachicus.

℞. *Radicum contuſarum Cyperi,*
Tormentillæ,
Biſtortæ, an. ℥ *ij.*
Foliorum Abſinthii Majoris,
Scordii,
Mentæ, &
Coſti Hortenſium,
Calamintæ,
Origani, &

A Fomentation for the Stomach.

℞. Bruis'd Roots of Cyperus,
Tormentil,
Snakeweed, *an.* ℥ ij.
Leaves of bigger-Wormwood,
Garden-Germander,
-Garden-Mint,
Garden-Coſtus,
Calamint,
Organie,

Marjoranæ,

Marjoran, æ an. Mij.	Marjoram, *an.* Mij.
Nucum Cupreſſi,	Cypreſs Nuts,
Tartari Rubri,	Red-Tartar,
Balauſtiorum, &	Pomgranate-flowers,
Roſarum Rubrarum, an. ℥ j ß.	Red-Roſes, *an.* ℥ j ß.

Mix them all together and put them into Baggs, and boyl them over a gentle fire in ſix pints of Chaly-beate water, to the conſumption of the third part, adding toward the latter end three pints of ſowre Red-wine, to preſerve the Spirits, and keep it cover'd to hinder the diſſipation of the Aromatical parts of the Plants.

Whole Baths and half Baths have been made uſe of time out of mind; and they differ in this, that whole Baths are for all the body except the head; and are more for pleaſure then for the cure of Diſeaſes; whereas half Baths are but for half the body and only thoſe parts which are below the Stomach, and are rather for cure then pleaſure.

Generally plain River-water is made uſe of luke-warm for Baths of pleaſure; with an addition to ſmooth the skin, ſometimes of Milk, ſometimes of Oyly-fruits made into Paſtes, or elſe of ſweet ſmelling flowers. But to add vertue to Baths or half Baths, decoctions proper for particular diſtempers muſt be preſcrib'd, which are many times the ſame Ingredients us'd in Fomentations. But then the quantity of Ingredients muſt be proportion'd to the quantity of Water: And the Bath muſt be kept in a heat as near to natural as may be; ſo that the patient may endure it with pleaſure. It is alſo neceſſary that the Patient ſhould purge before hand; though purges may be ſucceſsfully given in the Baths themſelves. Nor is it good to ſtay in the Bath above one or two hours at a time, though you may go into it two or three times a-day, and alſo in the night time if there be occaſion.

But becauſe the Ladies oftner uſe theſe Remedies then Men, as well for their particular Diſtempers as to preſerve the beauty of their skins, I will communicate to them one Bath of which I have known the good effects, as-well in ſmoothing the wrinkles and ſhrivelings of the skin, and the chaps of Womens Bellies and Breaſts after lying in, as to beautifie and whiten the skin and continue its plumpneſs, and a ſound diſpoſition of body.

Put two pound of Rice well cleans'd and peel'd into an Earthen-pot varniſh'd within, and of a good bigneſs, and having boyl'd them over a gentle fire in Milk, to the entire diſſolution of the Rice, beat apart in a large wood'n-mortar with a wood'n-peſtle four pound of Almonds blanch'd, two pound of the Cold-ſeeds, and a pound of white Poppy-ſeed, and reduce it into a Paſte, hardly to be felt, to be mix'd with the Rice diſſolv'd in the Milk.

Then heat as much River-water as is needful for the Bath, and diſſolve in it half a pound of Rock-allum: then let the party go into the Bath with a pound and a half, and firſt rub thoſe parts which have moſt need, and then the reſt of the body, and when all the Paſte is ſpent, let her ſtay there two hours or more: then change the water, and continue this Bath Morning and Evening for ſeven or eight days. Coming out of the Bath anoint the wrinkl'd parts with a Cerate made of Oyl of Eggs ℥ ij. White-wax four ounces, and as much Lead melted and well waſh'd, and reduc'd into a Cerate by incorporation. I leave the Ladies to the Experience of this Bath, for I know not how to praiſe it enough.

CHAP. IX.

Of Evaporating Baths, and Dry Baths.

THE ſame Ingredients ſerve for Evaporating Baths, as for Baths, half-Baths, and Fomentations.

The principal ends of Evaporating Baths are to eaſe pain, ſoft'n, open, and attenuate, or to cloſe and fortifie; by raiſing the Vapours, and cauſing them to aſcend to the part affected.

The moſt frequent uſe of evaporating Baths are in Diſeaſes of the Fundament and Matrix, and alſo for Infirmities of the Ears and Teeth. Generally the Patient is order'd to ſit in a Chair with a hole bor'd in it, and clos'd round at the bottom. Sometimes Fun-

nels are made uſe of, eſpecially for Diſeaſes of the Matrix, as alſo for the Ears and Teeth. Care muſt be taken for to moderate the heat of theſe Baths, and to continue or renew them as occaſion requires.

As for dry Baths call'd Stoves, they may be made uſe of for ſome particular part of the body, but their chief uſe is for the whole body. There is no other heat made uſe of for theſe, but that of Coals, Bricks, or ſome other heated Subſtances. Which are variouſly made uſe of, and in various Veſſels, which every one may invent as their Genius prompts them. Onely care muſt be taken, that the Bath be proportionable to the Diſeaſe and the ſtrength of the perſon that uſes it. Theſe Baths are very convenient for moiſt complexion'd perſons, not only in Venereal Diſtempers, but alſo in Rhumatiſms, univerſal or particular pains of the Members, as alſo in Palſies.

CHAP. X.

Of Epithemes.

Epithemes are either liquid or ſolid: Liquid Epithemes may paſs for Fomentations, only the difference is, that Epithemes are only to temper the extraordinary heat of the Liver, and to fortifie the heart againſt the malignity of Diſeaſes, and are only apply'd to one or other of the Bowels, whereas Fomentations are apply'd to all the parts of the body.

Slight Cordial and hepatic Decoctions, ſimple and compound diſtill'd Waters, Vinegar, juice of Citrons, Cordial and hepatic Powders, Confections of Alkermes and Jacinths, as alſo Treacle and Mithridate, are the ordinary matter of liquid Epithemes, of which I ſhall give two Examples, one for the Heart, the other for the Liver.

℞. *Aquarum Cardui Benedicti,*		℞. Waters of Carduus Benedictus,	
Bugloſſi,		Bugloſs,	
Borraginis,		Borrage,	
Roſarum, an.	℥ *ij.*	Roſes, *an.*	℥ ij.
Aquæ Theriacalis,		Treacle-water,	
Succi Citri, an.	℥ *ij.*	Juice of Citron, *an.*	℥ ij.
Confectionis Alkermes,	ʒ *ij.*	Confection of Alkermes,	ʒ ij.
De Hyacintho,	ʒ *j.*	Of Jacinths,	ʒ j.
Pulveris Diamargariti frigidi,	ϑ *ij.*	Powder of cold Diamargarite,	ϑ j.

Mix all together, and make an Epitheme, to dip Wollen-cloaths in, being lukewarm, to be apply'd to the Region of the Heart, alternately for an hour or two.

℞. *Aquarum Nymphæa,*		℞. Waters of Water-Lillies,	
Portulacæ,		Purſlain,	
Oxalidis, &		Sorrel,	
Solani, an.	℥ *ij.*	Night-ſhade, *an.*	℥ ij.
Aceti Roſati,	ʒ *j.*	Vinegar of Roſes,	ʒ j.
Pulveris Diarrhodon Abbatis, &		Powder of Diarrhodon of the Abbot, and	
Diatria Santali, an.	ʒ *j.*	Diatria Santalin, *an.*	ʒ j.
Trochiſcorum de Camphura,	ʒ ß.	Trochisks of Camphire,	ʒ ß.

Make an Epitheme to be apply'd lukewarm to the Region of the Liver.

You may obſerve the manifeſt eaſe which the ſick receive from theſe Applications in reſtleſs burning Fevers, and from thence judge of the advantage and benefit afforded by them.

Confections of Alkermes and Jacinths, Mithridate, Opiate of *Salomon*, Diaſcordium, Conſerve of Roſes, Gillow-flowers, Bugloſs, *&c.* and Powders of Diamargariton, Diarrhodon, Diatria Santali, *&c.* as alſo the Oyl of Scorpions of *Matthiolus* are the ordinary Ingredients of ſolid Epithemes, the uſe whereof is only for the Heart and Liver. They are laid on after the application of the liquid ones, and ſuffered to lye as long as they will hold on. The uſual method of Preſcription is this,

Conſervarum

℞. *Conservarum Tunicæ, &*	℞. Conserve of Clove-Gillow-flowers, and
Rosarum, an. ℥ ß.	Roses, *an.* ℥ ß.
Confectionis Alkermes, &	Confection of Alkermes, and
De Hyacintho, an. ʒ *ij.*	Jacinths, *an.* ʒ j.
Theriacæ probatæ, &	Approv'd Treacle, and
Pulveris Diamargariti frigidi, an. ʒ *j.*	Powder of cold Diamargariton, *an.* ʒ j.

CHAP. XI.

Of Bags and Caps quilted with Powder.

THe inconvenience of wearing Plaisters long upon the Stomach, and especially in tedious Diseases; and the obstinate Diseases caus'd by the excess of the moisture or coldness of the brain, was the reason of the invention of quilted-Caps and Stomachers: For which those Aromatic Powders already set down may serve as the examples of Receipts sufficient; I shall only add that these Powders need not be too finely beaten, to the end they may preserve their virtue the longer, and may not be subject to get through the Taffaties of which the Caps and Stomachers are made.

CHAP. XII.

Of Perfumes.

BOth the healthy as well as the Sick may equally receive benefit or mischief from good or bad smells. And though good smells are generally sought for, yet bad scents are not always to be rejected, as being necessary for the cure of some Distempers, that sweet smells are the cause of in some persons.

Take three drams of Florence-Orrice, three drams of Benjamin, one dram and a half of good Storax, a dram of Lignum Rhodium, half a dram of yellow-Saunders, half a scruple of Aromatick-Reed, as much Flowers of Benjamin and three Cloves, mix this Powder in six ounces of good Rose-water, and three ounces of Orange-Flower-water, and having kept them in the cold in a Matrass for twenty four hours or more, pour out some part of the mixture into a Perfuming-Pan moderately heated, and keep the rest for use in the Matrass, or else in a strong-glass close stopp'd. You may, if you please, add to this Composition some few grains of Musk and Amber-greese.

To make Pomanders or Bracelets, take eight ounces of Willow-coal, two ounces of Labdanum, two ounces of Mastick in tears, and two ounces of yellow-Amber, and having mix'd these Powders, incorporate them with Muscilage of Gum-tragacanth extracted with Rose-water: Then make up the Pomanders of what figure you please, and dry them in the shade. They that will be at the cost may add to these Pomanders odoriferous-Tacamahacca, as also Musk and Amber-greese.

These Pomanders are not only good to burn, but also to perfume the Caps and Linnen of those that having cold and moist Brains are subject to defluxions and Rhumatisms. They may also take the fume into their Mouths and up their Nostrils.

Women also that are troubl'd with the suppression of the Menstruums and Hysteric Passions may sit over the Smoak of these Pomanders.

It is also good for those that are troubl'd with Asthma's and thick and viscous Flegm, to receive the smoak of these Pomanders at the Mouth and Nostrils. But they are nought for those that are troubl'd with spitting of blood, and Ulcers of the Lungs.

Sometimes it is enough to burn Amber, Mastich, or Tacamahacca alone, or some other Gum of the same nature; or else Cephalic, pectoral or Hysteric Plants, according to the judgment of the Physician.

The Fume of Cinnaber is sometimes us'd to raise a Flux in Venereal Cures, especially when it cannot be done by friction, or other Preparations of Mercury.

But though Mastich, Olibanum, Benjamin, Labdanum, Calamus Aromaticus, or some other Aromatics are mix'd with it to hinder the bad Effects of the Cinnaber, I think

think the beſt Correction is to let it alone if poſſible. The fume of Cinnabar is us'd with leſs danger for the Cure of ſtubborn and Venereal Ulcers, ſo they be remote from the Head and Mouth.

CHAP. XIII.

Of Frontlets.

THE cruel Torments caus'd by pains in the Head occaſion'd the invention of Frontlets; which ſerve in fortifying the brain, to diſcuſs, ſuppreſs, and cauſe tranſpirations of the Vapours, qualifie their heat, and aſſwage their pricking Torture.

Frontlets are ſometimes made of dry Ingredients, as Roſes, Flowers of Elder, Water-Lillies, Sanders, Corianders bruis'd, Betony, Marjoram, or Lavender cut, Kernels of Peaches and Abricots.

Sometimes it ſuffices to bind to the Fore-head and Temples Linen that is dipp'd in Roſe-water, Vinegar, or Elder-water. Sometimes the green Leaves of Water-Lillies, Gourds, Lettice, Purſlain, and Vine-Leaves, *&c.* eſpecially for thoſe Diſtempers of the head that attend burning Fevers. But the moſt effectual Frontlets are made of Conſerves of Flowers, Extracts, Seeds, Oyntments, Powders, and other proper matters made into a Paſte, and ſpread upon fine Linen, to be laid to the Forehead and Temples.

℞. *Conſervæ Roſarum Rubrarum, Nymphææ, an.*	ʒvj.	℞. Conſerve of Red-roſes, Water-Lillies, *an.*	ʒ vj.
Seminis Papaveris albi contuſi, Pulveris Diatria ſantalon, & Unguenti Populei, an.	ʒj.	White-poppy ſeed bruis'd. Powder of Diatria Santalon, Popler Oyntment, *an.*	ʒj.

Make a Frontlet to be apply'd cold to the Forehead and Temples.

℞. *Conſervæ Violarum, Roſarum, & Nymphææ, an.*	℥ ß.	℞. Conſerve of Violets, Roſes, and Water-Lillies, *an.*	℥ ß.
Pulveris trium Santalorum, & Coriandri, Nucleorum Perſicorum, contuſorum, & Extracti Liquidioris Opii, an.	ʒj.	Powder of the three Sanders, and Corianders, Peach-kernels bruis'd, and Liquid Extract of Opium, *an.*	ʒj.

Sometimes it is enough to apply to the Forehead and Temples equal parts of Oyntment of Populeum and extract of Liquid Opium: or to make a Frontlet of the Kernels of Peaches or Abricotts bruis'd in a Mortar with about a ſixth part of Bay-Salt, and as much Powder of Roſes.

Frontlets to ſtop thin and ſharp defluxions upon the Eyes, are made by incorporating equal parts of Bole-Armenian, Seal'd-Earth, Maſtick and Dragons blood in Powder with whites of Eggs; then reduce it into a Paſte and ſpread it upon Tow, to be apply'd to the Forehead and Temples.

CHAP. XIV.

Of Lotions.

Lotions are a ſort of Remedies between Fomentations and Baths.

Cooling and ſleep-procuring Lotions are prepar'd in reſtleſs Fevers. To which purpoſe we boil in Water the Roots, Leaves, and Flowers of Water-Lillies, the Leaves of Lettice, Purſlain, Willow and white Poppies, and the cold Seeds, to waſh the hands and feet of the Patient from time to time.

Sometimes the head is to be waſh'd with a clear Lye made of the Aſhes of Vine-twigs, to cleanſe off the greaſineſs of the hair. Sometimes Lotions are prepar'd for the

the cure of the Scurf. Among the reſt that of the ſimple Decoction of Water-Creſſes in common water; or that of the compound Decoction of the Roots of Orrice, Aſſarabacca, Leaves of Ivy, Wormwood, Fumitory, Celandine, Scabious, creeping Thime and Marjoram, Laurel-berries and Lupins, boil'd together in a clear Lye of Juniper-wood. This Lotion is to be continued for ſeveral days in the wain of the Moon, after the uſe of general Purgers and Diaphoreticks. Sometimes to theſe Decoctions are added the Dungs of Pigeons, Geeſe, and Sheep; the Roots of Patience and Ellebore, Coloquintida, Euphorbium, Verdigreeſe, and ſeveral other penetrating Medicaments, where gentler Remedies will not prevail.

There is a Lotion alſo to be made of the Decoction of Lupins, Staves-acre, Wormwood, and leſſer Centaurie in Vinegar, to waſh the head, and ſometimes the whole body, to kill Lice and Vermine.

To make the Hair grow, and to keep it from falling off, the Decoction of the Maiden-hairs, and Female Southernwood is an excellent Lotion.

Several Lotions are made to cure the Itch, Tetters, Warts, and other Deformities of the Skin, not only of the Decoctions of the Roots and Leaves of Elecampane, Sowre-Dock, Scabious, Fumitory; but alſo of the Diſſolutions of Mercury made in ſtrong-water, or Spirit of Nitre, mix'd with a good quantity of ordinary water, to waſh the hands, arms, legs, and feet, not coming near the head, nor any other part of the body which the Mercury may prejudice.

The head may alſo be waſh'd with Spirit of Wine, or the Queen of *Hungaries* Water, to ſtrengthen the Brain, diſſipate the ſuperfluous moiſtures thereof, and heal Contuſions. It is good alſo to waſh the other parts of the body with the ſame Liquors in Rhumatiſms, and to appeaſe pains of all ſorts. It is good alſo for Burns, adding a little Vitriol, or ſome few Grains of Verdigreeſe.

Ulcers and Wounds are alſo to be waſh'd with Tinctures or Decoctions of Birthwort, Gentian, Centaury, Periwinkle, Worm-wood, Gold'n-Rod, Sanicle, *&c.* in the juices of the ſame Plants or in White-wine; adding ſometimes Powders of Myrrh, and Aloes; of which, when the Wounds are deep, Injections are to be made.

I omit the Imbrocations or Aſperſions of the Ancients, as altogether out of uſe.

CHAP. VII.

Of Collyriums.

Collyriums are liquid Remedies appointed for Infirmities of the Eyes. Which name is particularly attributed to Trochisks of Ceruſe of Rhaſis, diſſolv'd in ſpecific Waters. Dry Powders alſo and Oyntments, us'd for the ſame Effect, are call'd by the ſame name: and improperly ſome liquid Remedies prepar'd for the cure of Venereal Ulcers.

There are many that boaſt themſelves to have exquiſite Receipts of this nature, and therefore I ſhall only give two or three Examples of ſuch as I have had ſucceſsful experience of.

℞. *Magneſiæ Opalinæ ſubtiliſſimè pulveratæ, &*	℞. Magneſia Opalina very finely pow-der'd, and
Tutiæ Alexandrinæ præparatæ, &	Tutia of Alexandria prepar'd,
Salis Saturni albiſſimi, an. ℈j.	Whiteſt Salt of Saturn, *an.* ℈ j.
Aquarum ſtillatitiarum,	Diſtill'd Waters of
Euphraſiæ,	Eybright,
Feniculi,	Fennel,
Roſarum, &	Roſes,
Chelidonii majoris, an. ℥ j.	Bigger Clandine, *an.* ℥ j.

Mix them together and make a Collyrium. Heat this Collyrium luke-warm, and waſh the Eyes as often as you think fit, to cure them of redneſs and inflammation, and to conſume the Pin and Web.

℞. *Sacchari*

℞. *Sacchari Candi,*	℥ *j.*	℞. Sugar-Candy,	℥ j.
Radicis Ireos Florentiæ,	℥ *iij.*	Roots of Florence-Orrice,	℥ iij.
Tutiæ Alexandrinæ præparatæ,	℥ *ij.*	Tutia of Alexandria prepar'd,	℥ ij.
Sarcocollæ,		Sarcocol,	
Vitrioli Albi, &		White-Vitriol,	
Aloes Succotrinæ, an.	℥ *j.*	Aloes Succotrine, *an.*	℥ j.
Caryophyllorum,	℈ *j.*	Cloves,	℈ j.
Aquarum Stillatitiarum,		Distill'd Waters of	
Euphrasiæ,		Eybright,	
Feniculi,		Fennel,	
Rosarum, an.	℥ *viij.*	Roses, *an.*	℥ viij.
Vini Hispanici,	℔ *ij.*	Spanish-Wine,	℔ ij.

Having pulveriz'd the Ingredients, and mix'd them with the Waters and Spanish-wine, put them into a Glass-bottle close-stopp'd, and expose them to the Sun for 15 days, stirring them very often; or else set them in a moderate sand-Bath as long, and keep the pure Liquor in a bottle close-stopt.

That which follows is a Powder which may be call'd a dry Collyrium, very proper to consume the serosities of the Eyes, and the Pin and Web, provided they be not under the tunicles of the Eyes.

℞. *Sacchari Candi,*	℥ ij.	℞. Sugar-Candy,	℥ ij.
Tutiæ preparatæ, &		Tutia prepar'd, and	
Stercoris Lacertæ, an.	℥ *j.*	Lizards-Dung, *an.*	℥ ij.
Vitrioli albi usti,		White-Vitriol burnt,	
Aloes Succotrinæ, &		Aloes Succotrine,	
Salis Saturni, an.	℥ ß.	Salt of Saturn,	℥ ß.

Pulverize and mix them all together for a dry Collyrium.

Blow the weight of two or three grains at a time into the Eye. It may be also mingl'd with Ophthalmic Waters for a liquid Collyrium.

Lanfrancus uses this Collyrium for the cure of Venereal Ulcers.

℞. *Vini Albi,*	℔ *j.*	℞. White-wine,	℔ j.
Aquarum Plantaginis, &		Waters of Plantain, and	
Rosarum, an.	℥ *iij.*	Roses, *an.*	℥ iij.
Auripigmenti,	℥ *ij.*	Orpine,	℥ ij.
Viridis Æris,	℥ *j.*	Verdigreese,	℥ j.
Myrrhæ		Myrrh,	
Aloes, an.	℈ *ij.*	Aloes, *an.*	℈ ij.

Mix them for use.

You must be careful in preparing this Collyrium to powder the Orpiment, Verdigreese, Myrrh and Aloes, very finely before you mix them with the Liquors. You may also dulcifie the Collyrium with three or four times the weight of Rose-water, Plantain-water, or Night-shade-water, when it is to be us'd, especially in injections, for Gonorrhea's when the venome is over; only take care that the Spermatic Vessels be neither ulcerated nor over-weaken'd.

I pass over in silence several other External Remedies little in use; believing it to be now high time to make an end of these Galenical Preparations, and that I have not forgot any thing which to the best of my Judgment deserv'd to be taken notice of, or which I may not have occasion to speak of in the next Part.

The end of the Royal Galenic Pharmacopœa.

THE THIRD PART OF THE Royal Pharmacopœa, CONTAINING CHYMICAL PREPARATIONS.

The Order and Method of the Third Part.

THE great correſpondence between the one and the other Pharmacy, and the mutual helps which they daily afford each other, oblig'd me to ſet down at the beginning of this Work ſuch general obſervations as might contribute to the underſtanding of both; and therefore I will only lightly and occaſionally touch upon what I believe I have already explain'd: Only give me leave to make application, and declare the uſe of the whole, while I ſpeak of Chymical Preparations in particular.

Chymical as well as Galenick Pharmacy acknowledges Vegetables, Animals, and Minerals, for the matter upon which all its operations are to be grounded, and of which ſhe prepares Remedies proper for the eaſe and cure of Diſeaſes. But whereas the Galenick Pharmacy ſeparates thoſe parts which it believes hurtful or unprofitable by ordinary means; and is contented to cleanſe, waſh, infuſe, boil, ſtamp, or mingle, according to occaſion, thoſe parts which it judges to be the beſt; Chymiſtry pierces farther into the bowels of mixt bodies, artificially to ſeparate all the parts which compoſe them; and thus diſplaying the pure ſubſtances, puts them into a condition to produce with efficacy all that can be expected from them.

This hinders not however, but that in this concord of matter and end, which is found to be between both the one and the other Pharmacy, Chymiſtry, as much exalted as it is, makes uſe of the ſame Inſtruments and Veſſels which the Galenick employs, though it makes uſe of a great many more; while the induſtrious diſcover new ones every day, when they deſign to make a ſeparation of mixt bodies to the heigth of exactneſs.

I have divided this Third Part into Three Books: In the Firſt, I treat of the Preparation of Vegetals, which are the firſt mixt bodies that ſeem to preſent themſelves firſt to the eyes, upon the ſuperficies of the Earth, which are familiar to us, and from which we draw abundance of Remedies. I make Animals the ſubject of the Second, not only becauſe that being for the moſt part nouriſh'd by Vegetals, their different parts ſeem in ſome meaſure to partake of their vertues, and to impart them to a great number of Remedies wherein they are us'd; but becauſe we feed upon ſeveral of them our ſelves. I have

reſerv'd Minerals for the ſubject of the Laſt Book; becauſe that being as it were all hid in the bowels of the Earth, they are not ſo familiar to us, and require more labour, and a more vehement fire, and much more skill than Vegetals or Animals.

But becauſe my main end is to ſhew the moſt ſure and eaſie ways to accompliſh all Chymical Operations, I will ſincerely communicate thoſe which I practiſe every day; and diſplaying without any reſervation Preparations fit to be known, I ſhall endeavour to explain my ſelf in ſuch ſort, that apprehending thoſe which I ſhall give, it may be no difficult thing to perfect others which I may omit; provided you obſerve the operations of Artiſts, and want neither Ingenuity, Inſtruments, nor other neceſſary means.

Furthermore, I have this hope, that having founded my Preparations upon Experience and Reaſon, and having avoided the prolixities of other Authors, there will be no cauſe to complain of my method, as having fix'd the vertues, doſes, and uſes upon the principal parts of which mixt bodies are compos'd, upon the various alterations which they undergo in Preparation, and the ſucceſs which I have obſerv'd upon ſeveral trials which I have made, upon a thouſand occaſions.

The

The First Book:

Containing the

CHYMICAL PREPARATION

OF

VEGETALS

CHAP. I.

Of the Distillation of Vegetals *in general.*

THE Extent of the Number of Vegetals being no less than that of the Surface of the whole Earth, and their Differences, Form, and Vertues being no less unlimited than their Number, it is no wonder, if Chymistry having labour'd from time to time to invent what she judg'd expedient for the preparation of mixt bodies, find continual occasion to put those means in practice, and to add thereto several new ones to obtain its ends.

Distillation, as familiar as it is, is one of the principal operations of which it makes use for the separation and purification of the parts of Vegetals, as also of Animals and Minerals. And though the Galenick Pharmacy may have some knowledg thereof, and have made use thereof for a long time for the ordinary preparation of waters, however it cannot boast of having attain'd the perfection of that operation, no more than of having gain'd the knowledg of separating and distinguishing the parts that compose the mixt bodies. For not having follow'd other than the ordinary ways, nor having had recourse to other than the most simple and most common Instruments and means; and neglecting besides those numerous operations of Chymistry, they fail of their purposes, not being able to dissolve those mixt bodies which they submit to Distillation.

The reading of *Mesues*, *Avicenn*, *Serapion*, *Rhases*, and all the ancient *Greek* and *Arabian* Authors, will sufficiently justifie these truths, so that we must be forc'd to confess, that Galenick Pharmacy would soon loose those advantages which it enjoys, did it not borrow several exquisite preparations from Chymistry.

And for as much as the various nature of Vegetals, their different composition, and the more or less compactness of the parts, constrain the Artist to vary not only his Fire, but the Vessels and Instruments which he makes use of, more especially in Distillation; I will set down the various methods which the Apothecary ought to use; nor will I forget to shew how he is to act when he is oblig'd to distill several parts of a different substance together, and to mix together some parts of Animals and Minerals.

The principal effect of Distillation is to dissolve by heat the fluid parts of mixt bodies, and above all of Vegetals; to separate them from the rest in vapour, and to embody them again, and to cause them to trickle drop by drop from the holes

which the Artiſt has prepar'd to give them paſſage forth. Chymiſtry acknowledges three ſorts of Liquors, which it draws from Vegetals by Diſtillation, the Watry, the Spiritous, and the Oily Liquor. Among which there is ſometimes a fourth obſerv'd iſſuing out of certain Plants; that is to ſay, a volatile Salt. The Watry humour, under the name of Flegm, is eaſily ſeparated from the other parts of the mixt body, when you move it by the heat of the fire. It is uſually moſt plentiful, but leaſt efficacious; nevertheleſs it is not to be deſpis'd, for beſides that it is able to temper the activity of the other ſubſtances, it contains ſome eſſential parts of the mixt bodies, which it carries with it in Diſtillation; ſo that it may be kept ſometimes for ſeveral months together without corruption, ſometimes from one year to another, and produces good effects, as may be obſerv'd in the diſtill'd waters of Plants, that have neither taſte nor ſmell. The Spiritous part is the moſt eſſential part that can be drawn forth by Diſtillation, and which all Chymiſtry acknowledges for an active principle, under the name of Mercury. There is uſually to be met with, in this Spirit, a kind of acidity, with the ſcent of the Plant it ſelf. It will keep a long time, and produces effects much more powerful than any that can be expected from the Watry humour. The Oily ſubſtance, which Chymiſtry acknowledges for one of the active principles, under the name of Sulphur, riſes uſually in Diſtillation among the Watry and Spiritous Liquors. It is burnable, and ſwims upon the top of the other ſubſtances, when it is pure; but it falls to the bottom when it is laden with any Salt or Terreſtrial parts. This ſubſtance encloſes within it ſelf whatever the Aromatick Plants contain of moſt vertue. It is of a ſtrong ſcent, and piercing taſte, and may paſs for the Quinteſſence of the Aromaticks. It may be preſerv'd a long time, provided you do not expoſe it to the injuries of the Air.

CHAP. II.

Of the Diſtillation of Roots, and the various ſubſtances that may be drawn from them.

WE find ſome Plants without Stalks, ſome without Leaves, others without a Flower, others without Seed, and without ſeveral other productions, which are reckon'd to be of the number of Vegetals; but we find no Plant without ſome Root, from whence all the other parts draw matter for their nouriſhment, growth, and ſubſiſtence. And we may ſay, with reaſon enough, that it is as impoſſible for them to be what they are without the Root, as for the Root to be what it is without the production of the Seed; at leaſt by ſome kind of Root able to produce its ſpecies, as in thoſe of Saffron, *&c.* Nor can this Root ſubſiſt, nor produce all its parts, without the aſſiſtance of the Earth, which ſerves inſtead of a Matrix; without the heat of the Sun, which affords it neceſſary heat; nor without the help of the Water, which conveighs to the Root whate're the Earth contains neceſſary for its ſubſiſtance, and for the growth, diſtribution, and perfection of all its parts. We muſt be alſo convinc'd, that the Root, eſpecially of Herbs that dye every year, can never impart thoſe vertues to the Plant which it does, did it not poſſeſs them before. And therefore there we uſually meet with all the principal vertues contracted together, which it is able to impart to the reſt of the parts of the Plants; provided you gather them in time, when the Root is fit for production, which is at the end of Winter, or the beginning of Spring.

But though theſe conſiderations oblige an Artiſt to a particular eſteem of the good parts and qualities which ſeveral Roots poſſeſs, and to endeavour to make ſeveral Chymical Preparations thereof; yet Diſtillation is one of thoſe operations which it leaſt employs, and which indeed is never practis'd but upon ſome Aromatick Roots, the principal parts whereof are eaſie to be drawn forth, and from whence I think it expedient to begin the Examples of Diſtillation, which I have propos'd to give in this Work.

Diſtil-

Distillation by descent is not to be us'd upon these Roots, for besides that it would consume the best of the substance of the Root; the violence of the Fire would manifestly alter their good qualities. But straight Distillation is to be made use of for this purpose; and you must also make choice of proper Menstruums and Dissolvents, wherein you may not only dissolve those parts of the Root which are pure and fit to be dissolv'd, but also cause the vapours to ascend together in Distillation, and then condens'd into Liquor, to fall down into the Recipient ready prepar'd. For this purpose you may make use of Cucurbits of Glass, of Potters Earth, or glaz'd Earth, with Glass-heads, to distill a small quantity of Roots. But when you distill any considerable quantity, you must make use of a Refrigerant, lesser or bigger, or of Vessels of Copper Tinn'd within, cover'd with their Moors head, and furnish'd with their Serpentine, which passes along a Vessel fill'd with cold water.

You must follow the same method for the Distillation of the Roots of Valerian, Masterwort, Angelica, Spignel, the Carline Thistle, and other Aromatick Plants, which are full of odorous, spiritful, and volatile parts, accompany'd with some Oil, and some volatile and fixed Salt.

For example: Take three pound of any one of these Roots dry'd, and having grosly stamp'd them, and put them into a great Cucurbit of Glass, pour upon them six pints of distill'd Time-water, and as much White-wine; having made choice of such a Cucurbit that about a quarter of it may remain empty. Then having fitted and luted on a Glass-head, and a Recipient for the beak of the head, leave them three or four days in digestion, over a very gentle Fire of Embers, or over a Cook's or a Baker's Oven. After which, having plac'd the Cucurbit in a Sand-Bath, make your Distillation with a moderate fire; which you must continue till the Water, that trickles forth, be almost without taste or smell; at which time let the Vessels cool, strain and press out the matters which remain in the Cucurbit, and having clarifi'd the Liquor, evaporate the superfluous moisture, till it come to the consistence of an Extract, which you must keep apart by it self in a Pot close stopt. You may may also dry the sediment, burn it, and reduce it into Ashes, to make a Lye thereof, after you have filter'd it, and consum'd all its moisture, to the coagulation of a Salt, to mix and keep among the Extract. You may do well to rectifie the Liquor distill'd, and in a Bath of Ashes or Sand, with a very moderate heat, to draw out the more subtle Spirit, which will be accompany'd with some odorous Oil that swims at the top; which you must separate and keep apart, in a little Glass Bottle very well stop'd, as a very precious Essence. The Water which remains at the bottom of the Cucurbit, being good for nothing, may be thrown away. The Extract thus prepar'd, containing nothing considerable in it self but the fixed Salt part of the Root, all the good parts being ascended in Distillation, cannot alone produce any extraordinary effects; however it may be of use, by giving it dissolv'd in its own Spiritful Water, which you may also enliven with its own Spirit, charg'd with its own volatile Salt, and mix it with some few drops of its own distill'd Oil, incorporated with a dram of Sugar finely powder'd, by means whereof you may mingle this or the like Oils with any sort of watry Liquor.

The substances which I have spoken of, powerfully resist the putrefaction of humours, and bad Air; so that they are us'd in all Epidemick distempers, and against the Pestilence. You may mingle and give them together, as I have said already, all these different substances, every one according to their just proportion; according to the natnre of the sickness, and the constitution and condition of the Patient. The dose of the Spirit, well rectifi'd and mingl'd with its volatile Salt, is from a scruple to a dram. The dose of the Spiritous Water, from two ounces to six, and sometimes eight. That of the Oil, from two to seven or eight drops. And that of the Extract, charg'd with its fixed Salt, from half a dram to two drams. All these different parts tend to the same purpose, which is to fortifie the Heart, the Brain, and all the noble parts of the Body; to expel by sweat, or by insensible transpiration, the malignant humours that are capable of being expel'd through the pores of the Body. And you shall feel the effects according to the quantity of the dose administred. The Extract is somewhat purgative, by reason of its fixed Salt. For which reason it may be very well mix'd among Purgers, in sicknesses where the other good parts, that I have spoken of, are useful.

You

You may incorporate the diſtill'd Oil with the preſs'd Oil of Nutmegs, to make a Balſom to carry in your pocket, in ſome little Box of Gold, Silver, or Ivory. Giving to the Balſom the name of the Root of the Herb out of which the Oil was drawn; and making uſe of them not only for their pleaſing ſcent, but alſo to fortifie the noble parts, eſpecially the Head, by putting it up the Noſtrils, and rubbing the Temples and Sutures of the Brain with it.

CHAP. III.

Of the Diſtillation of Juicy Herbs, eſteem'd to be Cold.

THough we may have ſome reaſon to prefer the Juice of moiſt Herbs, and without ſcent, before the Water which is to be drawn from them; and that we muſt confeſs, that the fixed Salt, which Herbs may have, does not uſually aſcend in Diſtillation; yet it would be a difficult thing to be without theſe Waters, where there is an intention to pleaſe thoſe Patients that cannot endure the taſte of Juices or Decoctions. Beſides, theſe Herbs are not always to be found, in regard they are dead all the Winter; nor will the juice or decoction keep many days without ſpoiling, unleſs you can rid them of their ſuperfluous humidity that cauſes the corruption, or change their conſiſtency from liquid into thick; or unleſs you ſcum, clarifie, and boil them with Sugar or Honey, to keep them like a Syrup.

Theſe Herbs are not to be diſtill'd by deſcent, nor ſide-ways, becauſe that by thoſe ways there could be no reaſonable ſeparation made of the pure parts from the impure; and that it would be a hard matter to prevent the latter from running and mixing with the former. For theſe reaſons we only make uſe of the ſtreight Diſtillation, which is only able to raiſe in vapour the moſt ſubtle Liquor of the Herbs, which fails not afterwards to embody in the upper part of the Limbeck, and to deſcend again, and ſo trickle into the Pipe which is fix'd into the Recipient. You muſt vary your Veſſels and your fire according to the various nature of the Herbs which you diſtill; for you neither make uſe of ſuch large Veſſels, nor ſo great a fire, for thoſe that are of a thin ſubſtance and cold in their quality, as for thoſe whoſe ſubſtance is thick, and compos'd of hot parts. We make uſe for the firſt of Glaſs Veſſels, or of Veſſels made of Potters Clay, and varniſh'd or glaz'd within. Yet the Diſtillation may be made in *Balneo Mariæ*, or the Evaporating Bath. But the latter muſt be diſtill'd in Veſſels of Copper Tinn'd; of which there are ſome call'd Refrigerants, which above the upper part, that receives the vapours that the fire ſends up from the ſubſtances, contain a ſmall quantity of cold water, to condenſe thoſe vapours, and cauſe them to deſcend into the Recipient. The others, call'd great Veſſels, are cover'd with a *Moors-head*, ſo call'd by reaſon of its form, to which there belongs a Beak, to which the Serpentine is join'd, variouſly writh'd, which paſſes along a Tunnel fill'd with cold water. Theſe great Serpentines are eſteem'd before Refrigerants, becauſe the vapours being rais'd, meet with more coolneſs, and are more eaſily condens'd, paſſing thwart ſuch a great quantity of cold water, than if they were only cool'd by as much water as the Refrigerant could contain of it ſelf. Theſe latter conſiſt of two parts, of which the lowermoſt, that contains the ſubſtances which are to be diſtill'd, is round and flat, and not above eight inches high. The upper part made like a Cope or a Judges Hood, proportionable at the bottom to the wideneſs of the Veſſel below, which it ought to enchaſe, muſt be wider and more exalted than the ordinary Heads; you muſt alſo there fit on and ſodder a kind of Box of Copper, higher and bigger, to ſerve as a Wall, which is to contain a good quantity of freſh and cool water, which environing all the Head, and being empty'd and fill'd from time to time, facilitates the diſſolution of the vapours, and prevents the ſcent of burning too, which the diſtill'd Waters eaſily contract, in

thoſe Veſſels which are call'd *Roſaries*, becauſe the common people uſe them for the Diſtillation of Roſes; making uſe for the moſt part of Leaden heads, not conſidering that the vapours riſing from the ſubſtances, and meeting in the inſide of the Head, gnaw and fret off ſome particles of the Lead, which manifeſtly change the quality of the Waters that corroded them; the taſte whereof is ſweetiſh, and the powder white, which precipitates it ſelf by degrees to the bottom of the Water; and is a certain ſign, as well as the tart taſte and greeniſh powder, which is found in the bottom of Waters diſtill'd in Copper Veſſels not Tinn'd, that certain particles of Copper are corroded off, and diſſolv'd in thoſe Liquors.

Now for as much as Tin is the only metal able to reſiſt the uſual vapours which riſe from Herbs in their Diſtillation, and the only metal that will not be corroded nor diſſolv'd; therefore great care muſt be taken, to Tin very well the inſide of Copper Veſſels; and indeed it would do better to make the Head of Lattin, inſtead of Copper Tinn'd. Yet a Leaden Head is very proper for the Diſtillation of Nightſhade, Plantane, white Roſes, and other ſuch like, which are deſign'd for Collyriums, and other outward uſes, becauſe the parts of the Lead which join thereto, increaſe the vertue of the Waters.

The heat of the *Balneum Mariæ*, or the Evaporating Bath, being not of force enough to heat the quantity of matter contain'd in thoſe Veſſels, eſpecially in the two firſt, to make a diſſolution, they generally make uſe of an immediate fire of Coals; but you muſt be very careful to govern it well; which it is impoſſible to do, if you have not Veſſels proportionable to the bigneſs of the Veſſels that contain the matters; and if you know not how to open and ſhut the doors and the Regiters juſt in the nick of time, to augment or abate the heat of the fire upon occaſion. Nevertheleſs, ſometimes the Bath of Aſhes or Sand will ſerve turn, under the Roſary, eſpecially when you would diſtill Herbs entire or chop'd, without any addition of moiſture; or when you would diſtill the Juice of any Plant, whoſe cooling quality a fire too violent might chance to alter.

The beſt method of diſtilling Herbs to purpoſe, that abound in moiſture, is to draw out the Juice and diſtill that, when you have purify'd it. It will not be neceſſary for me to lay down in this place, the method how to draw forth and purifie all ſorts of Juices, having already done it in the firſt Chapter of the Second Part of this *Pharmacopœa*, ſpeaking of the *Galenical* preparation of theſe Juices. But it may not be amiſs to make ſome reflexion upon the various nature of Juices, which depends upon the nature of the Herbs from whence they are drawn, and to have regard not only to the variety of the ſubſtances which compoſe them, but chiefly to the quantity of thoſe that predominate in every one of them; to fit himſelf with Veſſels, and order his fire in ſuch manner, to the end he may find in the diſtill'd Water, that which ſhould aſcend by Diſtillation, and at the ſame time be maſter of the Salt parts that uſually remain in the ſediments of the Juice, or in the ſetlings of the Herbs from whence it was drawn.

You may to very good purpoſe put into Cucurbits of Glaſs, or Potters Earth, or glaz'd Earth with Glaſs heads, the puriſi'd Juice of the Leaves of the Water-Lilly, the greater and leſſer Houſleek, Wall-Penniwort, Lettice, Garden Nightſhade, and ſuch like Herbs that abound in moiſture, have very little Salt parts, and leſs Sulphury; the Diſtillation whereof is made in *Balneo Mariæ*, or the Evaporating Bath, when you ſeek rather for the refreſhing quality, than the preſervation of the Waters diſtill'd. But when you would cauſe the moſt eſſential part of thoſe Herbs to aſcend by Diſtillation, then you muſt make uſe of the Bath of Aſhes or Sand, moderately heated. For by this means the Water riſes with ſome ſpiritful volatile parts, ſomewhat ſaltiſh, and accompanied with ſome acidity, which ſerves to preſerve and render it efficacious. You may alſo ſearch for the fixed Salt in the ſettlement of the Herbs, to macerate it in their diſtill'd Water, though the ſmall quantity you will find is hardly worth your trouble.

You may diſtill alſo the Juice and alſo the Leaves of theſe Herbs entire, or chopt, by a Roſary cover'd with a head of Lattin, or Copper Tinn'd, plac'd in a Bath of Aſhes or Sand; and draw off the good Waters, provided you take care to order your fire, in Diſtillation; and be careful not to roaſt or ſcorch the ſubſtances when their moiſture is almoſt conſum'd.

There is not much difference to be obſerv'd in their vertues, no more than in the uſe of the Waters which are drawn from theſe Herbs. They are inwardly made uſe of to allay the heat of Fevers, and aſſwage the heat of cholerick humours,

mours, as alſo to provoke ſleep, giving from two ounces to ſeven or eight, alone or mingl'd with ſome proper Syrrup, in manner of a Julep. They are alſo made uſe of outwardly, as well to cool and ſmooth the complexion, as to diſſipate rednes, to cure Eryſipela's, and to extinguiſh all manner of volatile fires, and external inflamations. The Water of Garden Nightſhade is with good ſucceſs apply'd to the laſt of theſe diſtempers; but it is never taken inwardly, unleſs in Gargariſms.

CHAP. IV.

Of the Diſtillation of Sorrel.

THE great affinity which the ſeveral ſorts of Sorrel have with Herbs already treated of, may be a reaſon ſufficient enough for you to diſtill them with the ſame fire, and to make uſe of the ſame Veſſels: But becauſe theſe Plants contain in their Juice an eſſential Salt, acid, tartarous, more plentiful, but very different from that of the Herbs of which I have ſpoken in the foregoing Chapter, the ſeparation of which I have omitted, as of which there is no advantage to be made without a moſt particular care; it is requiſite you ſhould know how to draw forth this eſſential Salt.

After you have drawn forth a good quantity of the Juice of Sorrel, gathered juſt when it begins to run up into Seed, at which time the moiſture thereof is beſt digeſted, and the good qualities thereof in their chiefeſt force; you muſt purifie the ſaid Juice, and having fill'd therewith three quarters of ſeveral Glaſs Cucurbits, and cover'd them with their heads, and plac'd them in a Sand Bath, upon a moderate fire, diſtill the Water forth till the Juice in every Cucurbit be two thirds diminiſh'd. Then letting the Bath cool, and having ſtop'd up the diſtill'd Water, pour out the Juice that remains in the Cucurbits by inclination into a Linnen Bag, to ſeparate it well from the Feces; and putting the clear Liquor into a clean Glaſs Cucurbit, cover'd with its head, make a new Diſtillation, by a *Balneum Mariæ*, between lukewarm and boiling; which you muſt continue, till the Juice remaining in the Cucurbit, come to be as thick as the conſiſtence of a Rob; at which time let the Veſſels cool, and afterwards carry the Cucurbit into a Cellar or a Vault, where the eſſential Salt of the Sorrel will chriſtallize in a few days, and ſtick to the bottom and ſides of the Cucurbit. Then by inclination pour forth into a little Cucurbit, the Liquor that ſwims above the Salt; and evaporating it in *Balneo Mariæ*, till it prove as thick as the former, put it alſo into the Cellar to chryſtallize. You may dry and keep both the one and the other in a Glaſs Bottle well ſtop'd, or diſſolve them and keep them in the diſtill'd Water, to render it of more vertue. You may alſo, the better to purifie it, diſſolve it in a quantity of the Water diſtill'd; then filter that Liquor through a brown Paper, and having evaporated the Water to the thin skim, by a moderate heat, chryſtallize the Salt in a Cellar, put it in a Bottle cloſe ſtop'd, and keep it for your uſe.

This Salt contains in it the beſt and moſt eſſential part of the Sorrel. It opens obſtructions of the Bowels; it cuts and attenuates thick and viſcous humours, and by that means ſenſibly redreſſes the diſtempers of the Liver and Spleen; it excites an appetite, and helps the digeſtion. The doſe is from half a ſcruple to half a dram, in its proper Water, or in ſome Broth. The diſtill'd Water is good to cool the heat of cholerick Fevers eſpecially. It is alſo put into Cordial Waters, and the ſame doſe is given of the Water as of the Salt.

CHAP.

CHAP. V.

Of the Diſtillation of hot Herbs, bitter, and without ſcent; and of ſome other Preparations that may be made at the ſame time.

YOU may diſtill Fumitory, Hops, Succory, Bleſſed Thiſtle, and other Herbs juicy, bitter, and without ſcent, proceeding according to the ſame method as in the Diſtillation of Sorrel. You may alſo make uſe of the ſame Veſſels, and diſtill with the ſame fire. But becauſe there is much uſe made of the diſtill'd Water of theſe Herbs; and for that they contain in them a plentiful Salt, between nitrous and tartarous; and for that you may alſo without altering their qualities, make them endure a hotter fire; you may, to good purpoſe, make uſe of a Refrigerant, or a large Veſſel cover'd with a Moors-head, and its Serpentine that runs athwart a Pipe fill'd with cold water, to diſtill their Juice, which you muſt have purify'd in the ſame manner as that of Sorrel.

But becauſe the eſſential Salt, which chryſtallizes in the Juice that remains at the bottom after Diſtillation, is uſually foul and clouded, as well by reaſon of the Terreſtreities that abound more in theſe Herbs than in the Sorrel, as by reaſon of ſome ſulphury particles that accompany thoſe bitter Herbs, eſpecially when they are in their full vertue; you muſt not only be careful to filter the Juices with all the exactneſs that you obſerve in the filtering of Sorrel, but to ſeek out alſo other ways to purifie thoſe Salts more perfectly. Wherein, that you may obtain your end, and ſave the Salt which remains in the ſediments of the Herbs, from whence you have drawn the Juice, you muſt dry that ſediment; then having burnt it, and reduc'd it to Aſhes, make a Lixivium of the Water diſtill'd from the ſame Herbs, and having diſſolv'd the chryſtalliz'd Juice, then ſtrain the whole through a courſe Paper. Then putting the filter'd Liquor into a Glaſs Cucurbit, with its head, draw forth the Water by a *Balneum Mariæ*, till you obſerve in that which remains in the Cucurbit, a ſmall film ſwimming upon the Liquor, and covering it like a little skin. Then give over Diſtillation, and let the Veſſels cool; and after you have let the Cucurbit remain four or five days in the Cellar, pour forth into a little Glaſs Cucurbit by inclination the Liquor which remains; and having again evaporated it to the *Pellicula*, dry that Salt with the former, and keep it for uſe, in ſome Glaſs Bottle very well ſtop'd, or diſſolve and keep it in its own diſtill'd Water.

The Salt which you draw from the ſettlement of thoſe Herbs, finding it ſelf depriv'd of its nitrous volatile part, conſum'd by the Uſtion and incineration, contains only the fixed tartarous Salt part. Whereas the Salt which remains at the bottom of the Veſſels after Diſtillation, is equally compos'd of the nitrous, volatile, and tartarous fix'd, which are the principal ſubſtances of thoſe Herbs. Nevertheleſs, the conjunction of the fix'd tartarous Salt of the ſettlement, agrees very well, being united to the other two, the vertue whereof it ſenſibly increaſes.

The Waters of Succory, Hops, and Fumitory are very much commended for purifying the maſs of the Blood, and for curing the diſtempers of the Liver and Spleen, as alſo thoſe of the Stomach which proceed from the putrefaction of humours. However they operate with more force when their Salt is diſſolv'd in them. The doſe whereof is from half a ſcruple to half a dram, and ſometimes to one dram. The doſe of the Water from two to ſix or eight ounces. The Salt is alſo ſometimes given in Broth, or other Liquors; or elſe mingl'd with other Salts, or with Opiates, or with other Remedies.

Bleſſed Thiſtle abounding more in nitrous ſulphury parts, than thoſe Herbs I have mention'd; the Salt and Water which is drawn from thence, work alſo more effectually. Now becauſe the more volatile Salt and ſulphurous parts of this Plant, eaſily aſcend with the Water in Diſtillation, and being join'd therewith,

are able to insinuate themselves into all the little Veins and Pores of the Flesh, and to attenuate the gross and thick humours that are contain'd therein. It is no wonder, that this Water should be every day given to provoke Sweats, and to carry away the subtil humours that accompany Fevers, especially such as are malignant, sending them forth in moist vapours, or by insensible transpiration.

CHAP. VI.

Of the Distillation of Wormwood.

VUlgar Wormwood, which is known for the largest of all, is more bitter than Succory, Hops, Fumitory, or Carduus Benedictus. It abounds more in fix'd Salt. It contains a sulphury, oily, and somewhat volatile Salt part, which Succory, Hops, and Fumitory have not; and of which Carduus has much less; which cannot be separated to the purpose from the fix'd parts, but by upright Distillation, and after you have added a good fair quantity of common water, or to do better, of its own proper Water. For though you may draw forth the Juice of Wormwood, while it is yet very young, and before it is grown up into Stalks, and then distill it as you distill the Herbs already spoken of; nevertheless, the confusion of the parts, and their defect of digestion, hinder the success of the Distillation. Whereas you may bring it to better perfection, if you stay till the Wormwood is grown up into Stalks, and that it is between flow'ring and seeding; at what time the Plant has made its principal digestions, and is in a condition to afford the Artist all the good parts which he can look for.

The most part of the Authors who have wrote of the Distillation of Wormwood, advise to make use of Fermentation. But my opinion is, that it is much better to let it alone, because the acid extraneous Fermentative, which you must be oblig'd to make use of, to procure the Fermentation pretended to, and the length of time which it would take up, would give way to the fixation or dissipation of the chiefest part of the sulphury and volatile parts which you look for; whereas you shall save all, proceeding otherwise.

Gather a good quantity of the Plants of Wormwood, about the full of the Moon, when they are between the Flower and the Seed, and after they have separated and thrown off all that they had of hard and woody, weigh them into twelve pounds, bruise them well in a large marble Mortar with a wooden Pestel, and having put them into a large Copper Vessel Tinn'd within, pour on forty Pints of River-water, heated between lukewarm and ready to boil; or if you would do better, pour on the same quantity of distill'd Wormwood-water, as hot as the former. Let not the substances take up above two thirds of the Vessel; then place the Vessel upon a Baker's Oven, buried in Sand as high as that part which contains the substances; then having cover'd the Vessel with a Blind-head, and well luted the jointures of both Vessels, leave it there for the space of four natural days; at the end whereof, having unluted the head, and set the Vessel upon a proper Furnace, cover it with a Moors-head with its Serpentine, and make a quick Distillation with Coal, but moderate, and distill it so long till the Water have neither taste nor smell; then letting the Vessels cool, strain and press out that which remains in the Vessel, and having clarify'd the Liquor with whites of Eggs, and strain'd it through a woollen Cloth, evaporate the superfluous moisture over a gentle fire, and continue evaporation till it have attain'd the consistency of soft Electuries, or that of Pills. Then dry, burn, and reduce to Ashes the settlement of the Distillation, and having made a Lixivium or Lye, and separated the fixed Salt by the usual ways, keep it apart, or dissolve it and preserve it in the spiritous Water. You may also rectifie all the distill'd Water in *Balneo Mariæ*, and receive the spiritous Liquor and volatile Salt, which will first ascend with the oily part; then having separated those two Liquors by a Glass Tunnel, or otherwise, preserve them apart in Glass Bottles well stop'd. After that, continue the rectification, and receive and stop up the odoriferous and spiritous Water,

which

which will follow the two ſeparated Liquors, caſting away the watry and unprofitable part that remains in the Veſſel after rectification.

The principal vertues which Authors attribute to Wormwood, is to cut and attenuate flegmatick humours that gather in the Stomach, and to aſſiſt nature to expel them. It is very proper againſt diſeaſes of the Liver and Stomach, the weakneſſes whereof it corrects, exciting the appetite and helping digeſtion. It is alſo good againſt the Worms, and diſeaſes of the Matrix. And in regard that Wormwood, without any preparation, has all theſe vertues, we may well believe that the purer parts thereof, which Chimiſtry undertakes to ſeparate, being deliver'd from the groſſer and more earthy, will produce much more efficaciouſly all the effects that can be expected from it.

The ſame method is to be obſerv'd in the Diſtillation of all other hot Plants, bitter and odoriferous; as alſo of thoſe which having ſcarcely any thing of bitterneſs, and containing leſs fixed Salt, are recommendable for their oily, odoriferous, and ſome volatile Salt parts.

CHAP. VII.

Of the Diſtillation of Scurvygraſs, Creſſes, *and other moiſt Plants, accounted Antiſcorbutick.*

THough the moſt part of thoſe who have written concerning the Chymical Diſtillation of Plants, recommend Fermentation to be us'd to to all Antiſcorbutick Plants, as well as for Wormwood and the like; and though perhaps I may not be of an opinion contrary to thoſe, who loving tediouſneſs and trouble, think it the beſt way; nevertheleſs the deſire I have not to waſte time, and to avoid trouble, when it may be done with advantage, have oblig'd me to a method more eaſie, and which I eſteem better.

All the World agrees, that Scurvygraſs, Water-Creſſes, and Garden Creſſes, Rocket, Brooklime, and ſuch like Herbs, that have a ſharp, picquant, and in ſome meaſure Aromatick taſte, abound in Spirits and volatile Salts; that thoſe Salts and volatile Spirits are very ſubtle, and the moſt eſſential parts of thoſe Plants; and that the chief deſign of the Artiſt ought to be, to ſeparate them from the other parts, and to make good uſe of them. The ſubtlety of theſe good Spirits is the reaſon why they are ſo ſubject to diſſipation; and that it is ſo difficult a thing to paſs thoſe Plants through all the degrees neceſſary to Fermentation, without looſing more of the good parts than the Artiſt, with all his care, knows how to retrieve, after that Fermentation. For which reaſon, my opinion is, that inſtead of having recourſe to any extraneous matter to advance Fermentation, we ought to content our ſelves with a proper Menſtruum, which by diſſolving and then joining themſelves to the moſt eſſential parts of theſe Plants, may alſo carry them away with it in Diſtillation, without changing their nature, but augmenting rather than diminiſhing their vertue.

For the better ſucceſs wherein, having gather'd the quantity which you intend of one of theſe Herbs, when it is in Flower, having ſlightly chopt it, and having put it in a Copper Veſſel Tinn'd within, pour upon it White-wine, as much as will cover the Herbs and three fingers over and above; in ſuch manner nevertheleſs that the ſubſtances ſhall not take up above a third part of the Veſſel; then having plac'd it upon a proper Furnace, and cover'd it with a Moors-head well luted, and having its Serpentine to it, running athwart a Pipe fill'd with cold water, and having alſo luted the Recipient to it, leave the Veſſels in that condition, without any fire, for twenty-four hours; after which kindle the fire in the Furnace, and having begun Diſtillation with a continu'd fire of Coals, ſo order it, that the drops that trickle down one after another, yet not too faſt, may cauſe

the ſpiritous and volatile parts of the Plant to aſcend and diſtill by degrees with thoſe of the Wine, and that all the fix'd and particularly the Salt parts may remain among the ſettlement, at the bottom of the Veſſel, to be ſeparated afterwards by ſtraining and preſſing the whole ſediment; and to the end they may be reduc'd to an Extract, after you have clarify'd the Liquor which contains them, and evaporated the ſuperfluous moiſture over a very gentle fire. This Diſtillation is to end, when the drops that fall are almoſt inſipid, which is a ſign that all the ſpiritous matter is aſcended.

But to the end you may have the Spirits of theſe Plants more full of vertue, more pure, and in greater quantity, after you have emptied the Veſſel, and ſet apart that which was contain'd therein, you ſhall put into it as much of the ſame Plant, as at firſt, and pour upon it all the Water which you have diſtill'd, and as much good White-wine as of the ſame Water. Then having cover'd the Veſſel with his Moors-head and Serpentine join'd to it, and having luted them as well as the Recipient, proceed by Maceration and Diſtillation, as the firſt time. After that, you ſhall ſtill do better, if after you have ſet aſide the ſettlement with the former, you put freſh Herbs into the Veſſel, and having pour'd upon them all the ſpiritous Water diſtill'd, you make a new Diſtillation. For having carefully luted the Veſſels, and well order'd your fire during Diſtillation, you ſhall have a Water well charg'd with the Spirit and volatile Salt of the Herb which you have diſtill'd; of which you may afterwards make rectification in a Matras, or large big-bellied Bottle with a long neck, cover'd with its head and well luted, with a Recipient well luted to it, plac'd in a Sand Bath under a moderate fire, keeping apart in a Glaſs Bottle cloſe ſtop'd the Spirit charg'd with the volatile Salt, that aſcends firſt; and keeping apart alſo the ſpiritous Water that follows the ſame Spirit; continuing the Diſtillation till the drops that fall are almoſt inſipid. As for the ſettlements, draw from them an Extract, according to the method already deſcrib'd. And that you may ſave all that the Plant has good for any thing, dry the ſettlement, and having reduc'd it to Aſhes, make a Lye with common water and filter it, and having evaporated the ſuperfluous moiſture, mix the Salt with the ſpiritous Water diſtill'd, or which is better, with the Extract. In regard its principal vertue is to purge away the moſt groſs matter by ſeige or by urine, for which purpoſe the fixed Salts principally ſerve.

This Extract is given alone in a Bolus, or diſſolv'd in ſome proper Liquor, from half a dram to two drams, and alſo to half an ounce; or elſe mingl'd with purgatives, abating the doſe of the Extract, and proportionating it to their ſtrength and quantity.

The Spirit and volatile Salt of Scurvy-graſs, Creſſes, and other Herbs of the ſame nature, and the ſpiritous Waters drawn off afterwards, are powerful remedies, and very ſpecifick, for the eaſe and cure of Scorbutick diſtempers; the cauſe whereof is attributed to thick and cold Seroſities, difficult to be diſſolv'd, which are mingl'd with the maſs of the Blood, and ſlack'n its circulation; whence enſue all the noiſom ſymptoms that attend upon that diſtemper.

The doſe of the Spirit well rectify'd, and charg'd with its volatile Salt, is from half a ſcruple to half a dram, and alſo to one dram. The Spirit may be giv'n in its own proper Water, in Wine or Broth; and the uſe thereof may be continu'd as occaſion requires, taking it ſometimes ſeveral times in a day, though in a leſſer quantity. The effect of theſe remedies is to conſume and diſſipate the moſt obſtinate Seroſities of the Blood, either by ſweat or inſenſible tranſpiration; to purifie the whole maſs of Blood, and reſtore that activity which is neceſſary to circulation; to fortifie the noble parts, eſpecially the concoctors of nouriſhment; and to remove all putrefaction.

CHAP.

CHAP. VIII.

Of the Diſtillation of Baume.

BAlm is an Herb ſo pleaſing in its ſcent, and alſo in its taſte, and ſo recommendable for its vertues, that it well deſerves to have its place among the Diſtillations of other Herbs. The greateſt part of thoſe who have written of Diſtillation, would have ſome other Liquor mixt with it, by reaſon of the little moiſture it has when it is in Flower; but that would but do it an injury, in regard there is as much moiſture in the Plant it ſelf as needs to be deſir'd.

You muſt take care to gather a good quantity of Balm, when it is young, tender, and juicy; to the end you may either extract the Juice by Diſtillation, as I have already ſhew'd, or diſtill it whole, or chopt in the Roſary, till its moiſture be almoſt all aſcended. Either way you may diſtill as much as you have occaſion for, and keep it in Bottles well ſtop'd, till there be more Balm in Flower and Seed, which you muſt bruiſe in a Marble Mortar with a wooden Peſtle, or elſe cut very ſmall; then having fill'd the two thirds of a Copper Veſſel Tinn'd within ſide, pour upon it the diſtill'd Water which you have ready, till it ſwim about three fingers breadth above the Herbs; after which having cover'd the Veſſel with the Moors-head, well luted, and having join'd to it alſo its Serpentine and Recipient, after a maceration of twenty-four hours over a very gentle heat, make the Diſtillation with a continu'd Charcoal fire; but ſo order'd, that the Diſtillation may be no more violent then I have already preſcrib'd for Herbs almoſt of the ſame nature, continuing it till the Water that diſtills have almoſt loſt its ſavour and ſmell. You may alſo empty out that which remains in the Veſſel, and put in freſh Balm; and having ſeparated and ſet aſide that little Oil that ſwims upon the top of the Water, pour that Water upon the freſh Balm, and make maceration and digeſtion, as before; by which means you ſhall have an odoriferous Water, containing in it all that the Balm has of volatile, and moſt ſpiritous; and beſides that, ſome little Oil that ſwims upon the top of it, and which deſerves to be preſerv'd with the reſt; as well for its pleaſant ſmell, as for the good effects which it may produce, in diſtempers of the Brain, and in thoſe of the Heart, the Stomach, and the Matrix; as alſo by reaſon of the mixture that may be made hereof with the preſs'd Oil of Nutmegs, to uſe inſtead of a Balſom, like the Oil of Aromatick Roots. It may be mixt from two drops to ſeven or eight, with ſome drams of fine powder'd, to divide all the parts, and make it fit to be mix'd with all ſorts of moiſt Liquors, particularly with its own Water, as the moſt proper to ſecond all its vertues.

The Water is preſcrib'd with good ſucceſs in melancholy diſtempers, in malignant Fevers, ſuppreſſion of Women's Courſes. The doſe and way to take Balm-water is the ſame with the preceding Waters.

There may be an Extract made of that which remains at the bottom of the Veſſel at every Diſtillation, proceeding in the ſame manner as in the preparation of other Herbs; that is, by drying, burning, and reducing to Aſhes the ſediment, to fetch out the Salt, either to keep it apart, or mingle with the Extract. The Extract is given in the ſame doſe, and ſerves for the ſame uſes as the former; for in regard it contains only the fix'd parts of the Balm, it is chiefly proper to fortifie the principal parts, and the parts of concoction, to take away the ſharpneſs of acids, to cut and looſen groſs and viſcous humours; to reſiſt putrefaction and putrifi'd humours, which it helps to purge away by ſtool and urine.

CHAP. IX.

Of the Diſtillation of Myrtle *Leaves.*

THey that inhabit the Southern parts of *France*, where Myrtle grows in great abundance in the Woods, find among that great quantity of Leaves whatever is requiſite for their Diſtillation. For they ſtamp and preſs the tops in the beginning of the Spring, for the Juice, which they may either diſtill alone, or with the Leaves bruis'd. But becauſe in theſe Northern parts, we have none but what we are forc'd to plantand bring up with care and induſtry, which is not enough to afford that quantity which might be deſir'd, we muſt make uſe of that little we have, and ſupply the beſt we can the defect of moiſture, without which we cannot well perfect Diſtillation.

For example, take three pound of the Leaves of Myrtle newly gather'd, and having bruis'd them in a Marble Mortar with a wooden Peſtle, and put them into a Glaſs Cucurbit, pour upon them ſix pints of the Juice of Knotgraſs, or Rupturewort, and having cover'd the Cucurbit with its Glaſs Cover, luted the joints with Amydon, or paſte of fine Flower, and fitted the Recipient to its beak, keep the whole in digeſtion over a Cook's Oven, during twenty-four hours; at the end whereof ſet the Cucurbit in a Sand Bath, and make a Diſtillation with a moderate fire, continuing it till the Water have neither ſavour nor ſmell; then take care to ſeparate and keep that little Oil which ſwims at the top of the diſtill'd Water, and which would be more plentiful in hot Countries.

Could you get another equal quantity of Myrtle Leaves, you might after you had empty'd and kept that which remains in the Cucurbit, put the freſh Myrtle Leaves in the Room of it, and having pour'd the diſtill'd Water upon them, obſerve the ſame maceration and Diſtillation as before; and by that means you ſhall have a Water much more efficacious, upon which will ſwim a ſmall quantity of new Oil, which you muſt add to the former; then draw forth the Extract from the remains, and the Salt from the ſettlement, after you have reduc'd it to Aſhes, as I have ſaid before; and keep them apart, or mingle them together.

The diſtill'd Water of the Leaves of Myrtles, is very much commended for weakneſſes of the Stomach and Bowels, and the diſtempers that attend it, as alſo for ſpitting and other loſſes of Blood. It is given either alone from two ounces to ſix, or elſe mix'd with half an ounce of Syrrup of Myrtles, or ſome other Aſtringent. It is alſo good to cloſe up the natural parts of Women after lying-in, as well taken inwardly as apply'd by fomentation to the parts. You may re-inforce the Water with a drop or two of its Oil, having incorporated it with a dram of fine powder'd Sugar. You may alſo make uſe of the Oil in Balſoms, which are prepar'd to comfort and fortifie the noble parts, for the ſmell is ſweet and very Aromatick; you may alſo make uſe of it to anoint the parts, having firſt fomented them with the Water. The Extract preſerving in it ſelf the impreſſion of the terreſtrial part of the Leaves, may produce good effects in all diſtempers that have need of cloſing and fortifying. The doſe is from half a dram to two drams, either diſſolv'd in its own Water, or in ſome other Liquor; it may be mingl'd alſo in Opiats, or in other Remedies.

I believe that theſe Diſtillations of Herbs which I have ſet down, will afford ſufficient examples for all the reſt, without any neceſſity of multiplying any more; ſo that it will be time now to come to the Diſtillation of Flowers.

CHAP.

CHAP. X.

Of the Diſtillation of Flowers in general.

FLowers are eſteem'd the faireſt production among Vegetals. They are the ornament of Gardens, the delight of the Country, the recreation of the Sight, the deſire of the Smell, the hope of the Seeds and Fruits that are to follow, and the ſubſtance of ſeveral exquiſite Remedies, every day prepar'd by the one and the other Pharmacy. Flowers are thoſe parts of Plants which to us ſeem to be moſt pure, which are leaſt charg'd with earthineſſes, and moſt eaſie to be diſſolv'd; the different ſubſtances whereof Chymiſtry ſeparates with leſs trouble and violence. Nevertheleſs there is more care to be us'd in Diſtillation of them, then of any other part of the Plants, in regard their parts are very open, and for that the principal parts are very ſubject to diſſipation; beſides, that there are ſome Flowers that will not endure Diſtillation at all, nor the leaſt touch of the fire, without a manifeſt alteration of their qualities, eſpecially thoſe that yeild any ſweet odour, which is the thing moſt carefully to be preſerv'd. For this reaſon it is, that the Artiſt ought above all things to dive into the moſt ſecret knowledg of the parts that compoſe the Flowers, before he goes about to diſtill them, to the end he may be able to fit his fire, and to chuſe the moſt proper Veſſels and means to ſeparate to the purpoſe, and at the ſame time to preſerve in their purity the ſeveral ſubſtances which are to aſcend and deſcend in Diſtillation, and to ſave as much as in him lies, the good fix'd parts, which oftentimes remain at the bottom of the Veſſel.

We many times make uſe of the ſame Veſſels for the Diſtillation of Flowers as for that of Herbs, but becauſe the delicacy of the ſubſtance of Flowers, renders them uſually more apt to receive the impreſſion of the fire then Herbs are, there is great care to be taken, ſo to order the fire that it may not alter the good qualities of thoſe which you deſire to ſeparate from the reſt by Diſtillation; or that it ſhould not cauſe to aſcend with the good ones thoſe that ſhould ſtay at the bottom of the Veſſels; or leaſt that by too much continuing the fire or augmenting it, you ſcorch the ſubſtances at the bottom of the Veſſel, and cauſe the whole Diſtillation to ſmell of burning too. For the avoiding of all which inconveniences, I will endeavour to ſhew you the moſt proper ways.

CHAP. XI.

Of the ſeveral Diſtillations of Roſes.

THE different methods which are to be obſerv'd in the Diſtillation of Roſes, proceeds rather from the diverſity of ſpirits, places, opportunities, and and means to do it, then from the variety of the ſorts of Roſes, or the different proportions of the parts that compoſe them; in regard there is not any ſort of Roſe which may not undergo all the Diſtillations which are to be invented or practis'd upon all the reſt. We find in the parts that compoſe Roſes, the five different ſubſtances which Chymiſtry acknowledges to be in the compoſition of mixt bodies, *viz.* the Watry, Spiritous, Sulphury, Salt, and Earthy parts. Nevertheleſs they are variouſly proportion'd in every ſort, whence proceed the differences principally obſerv'd in the colour, ſmell, and ſavour. For the volatile ſubſtances abound more in ſome, and the fix'd in others. The Red Roſes, commonly call'd Provence Roſes, abound more in earthy parts, and fix'd Salt, then all the other Roſes. They have alſo many watry parts that are united to the foregoing, ſo that the ſpiritous and ſulphury lye very deeply conceal'd, and appear not till after

after the watry parts have quitted their ſtation. For which reaſon, it is not uſual to diſtill theſe Roſes till they have loſt their ſuperfluous moiſture; and not then neither, without mixing them with other Aromaticks.

Pale Roſes are they which we moſt often diſtill, and upon which we not only practiſe ſeveral Diſtillations, but alſo upon which both the one and the other Pharmacy exerciſe moſt preparations, and extract moſt remedies. They contain much moiſture, attended with ſeveral volatile ſpiritous particles, a few ſalt ones, and ſome few oily and ſulphurous; both the one and the other very odoriferous. They have alſo leſs earthy parts then the Red ones, but as much fix'd Salt; which being united with the more groſs ſulphury parts, and more deeply lodg'd, and not having paſs'd the fire of Calcination, which the moſt part of Salts endure in their purification, purge moſt gently bad, but above all, flegmatick humours. I have ſaid in the ſecond Part of this *Pharmacopœa,* ſpeaking of the preparation of Syrrup of Roſes with Sugar and the Juice of Roſes, that in making the decoction in a Glaſs Cucurbit, in *Balneo Mariæ,* and covering it with a Glaſs head well luted, you may ſave then the vapours which riſe from the Juice of Roſes, which would otherwiſe diſſipate, and draw out a very good Roſe-water. But becauſe the Shops have need of a much larger quantity of Roſe-water then can poſſibly be drawn forth this way, recourſe muſt be had to other means.

They that will diſtill Pale Roſes, or make any other preparations thereof, muſt be careful to gather them ſoon after the riſing of the Sun, and if poſſible, in fair weather, that they may not be charg'd with any extraneous moiſture, and that the ſeveral ſubſtances that are to be drawn forth by Diſtillation may be altogether pure.

The moſt gentle method, but the ſloweſt for the Diſtillation of Roſes ſo cleans'd, is to bruiſe them, and fill about two thirds of a large Glaſs Cucurbit, and having cover'd it with its head well luted, to make the Diſtillation in *Balneo Mariæ,* between lukewarm and boiling, or in an evaporating Bath boiling, till the Roſes are almoſt dry'd in the Cucurbit. For by this means you ſhall have a Roſe-water very odoriferous, but a ſmall quantity.

You may alſo put equal parts of Roſes ſtamp'd and the Juice of the ſame Roſes in one of the ſame Glaſs Cucurbits cover'd with a head well luted, and make a Diſtillation thereof in a Bath of Aſhes or Sand. For by well ordering your fire, eſpecially toward the end, you ſhall have a Roſe-water, at leaſt as good as the firſt; and from the remains may draw a purgative Extract, as good as any other that may be drawn out of the Roſe.

And to content thoſe that would preſerve the colour of the Roſes in the Water diſtill'd, take a handful of dry'd ſhred Provence Roſes, and having ſprinkl'd them with never ſo little good Spirit of Sulphur or Vitriol, or the Juice of Limons, fill the hollow of the Canal of the Glaſs head with it, before you fit and lute it to the Cucurbit; for then by well ordering your fire during the Diſtillation, you ſhall have, without changing the good ſmell, or qualities expected, a Roſe-water of a fair colour, and as much or more Vermillion then the Roſes from whence they were drawn. By means and ways not much unlike to this, you may in diſtilling all ſorts of Waters of the ſame nature, give them the colour which you deſire; as alſo, if you pleaſe, the ſcent of Musk, Ambergreeſe, or any other Aromatick, by pulverizing them, and putting them wrapt up in a little Cotton, into the Canal or beak of the head.

You may alſo put into a Roſary of Copper well Tinn'd, the Roſe-leaves, whole or bruis'd, and add alſo as much as you pleaſe of the Juice of the ſame ſort of Roſes, and make the Diſtillation in a Bath of Aſhes or Sand; for then ordering your fire prudently, you ſhall have an excellent Roſe-water. You may alſo ſave the Extract, as before.

Some Ladies diſtill Roſe-water by deſcent, with a great deal of eaſe, ſpreading the Roſes about an inch thick upon a fine Linnen Cloth, ty'd upon the top of a large Glaſs Pot, or elſe of glaz'd Earth, and applying over it the bottom of a flat Diſh of white Lattin, or of ſome other Veſſel of ſome ſuch kind of ſubſtance, proportionable to the extent of the Roſes, having the inſide of its hollowneſs cover'd with Aſhes about half an inch thick, and the upper part of the Aſhes cover'd with ſoft burning Coals. For by this means the heat of the fire penetrating the Aſhes and the Diſh, and warming the Roſes, diſtills the Water into the Pot. This Water in truth is not ſo good as that of which I have given you

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the preparation; nor will it continue ſo long; and yet it is not to be rejected.

Some there are that would have the Roſes put into a Cucurbit of glaz'd Earth, and applying thereto a Cover of white Lattin, or Copper Tinn'd, and pierc'd with little holes, turn it upſide down, and place it in a proper Furnace, and adding a Recipient underneath its orifice, light a fire round about the Cucurbit, and make the Diſtillation by deſcent, as we diſtill Wood. But this is the way to burn the Roſes; and the Water would very much want the good qualities which it ought to have. Beſides, it would but be an injury to the Diſtillation, when there are ſo many better ways, and more to the purpoſe.

They that have need of much Roſe-water, may inſtead of Cucurbits, or Roſaries, diſtill their Roſes in great Veſſels of Copper Tinn'd within, and cover'd with their Refrigerant and their Moors-head, with a Serpentine running athwart a Pipe of cold Water, proceeding as I have already ſhew'd in the Diſtillation of Herbs; bruiſing the Roſes, and moiſtning them with the Juice of other Roſes, or the diſtill'd Water which you may have ſav'd the year before, and making Diſtillation over a continu'd fire of Charcoal, but very moderate. You may alſo pour the diſtill'd Water upon other Roſes put into the ſame Veſſel, to make a new Diſtillation, and alſo repeat the ſame operation ſeveral times to have an excellent Roſe-water.

But becauſe it is neceſſary for us to employ our greateſt care to find out all the good parts of mixt bodies; and for that it is poſſible, in diſtilling Roſes, to raiſe a ſulphury and inflamable part, and by the ſame means alſo a moſt odoriferous Oil, though not much in quantity; it will not be from the purpoſe to ſhew you which way to go about it.

For example, take forty pound of Pale Roſes cleans'd, and having bruis'd them well in a Marble Mortar with a wooden Peſtle, and ſtrew'd the whole quantity by degrees with two pound of grey Salt powder'd, put the whole, if you can, into a large Pitcher of Potters Earth, or at leaſt into two; and having ſtamp'd and cruſh'd the Roſes into a ſoft maſs, ſo cloſe as not to be penetrated by the Air, and having ſo order'd it, that the Pitchers may be quite full, ſtop them up with a good Cork ſtopple cut fit, and clos'd with yellow melted Wax, to prevent air from entring in; then ſet the Pitchers in a Cellar five or ſix weeks; after which, when you come to op'n them, you ſhall perceive the Roſes to have a kind of a ſmell of Wine intermix'd with acid; which is a ſign of their fermentation, and of the aptneſs of the ſpiritual parts to ſeparate from the terreſtrial, and to aſcend in Diſtillation. Then take out a pound of theſe Roſes, and having put them into a Glaſs Cucurbit, ſtop up the Cucurbit as exactly as before, and cover it with a Glaſs head well luted; and having well fitted and luted the Recipient, make a Diſtillation in *Balneo Mariæ*, between lukewarm and boiling hot, continuing the ſame till the moiſture of the Roſes be almoſt quite diſtill'd off. After which, having empty'd the ſettlement out of the Cucurbit, put in the room thereof the quantity of ſeven or eight pound of the Roſes enclos'd in one of the Pitchers; and having ſtop'd up the Cucurbit as before, and pour'd upon the Roſes the Water of the firſt Diſtillation, put on the head again, well luted as well as the Recipient, and ſet the Cucurbit in a Bath of Sand, and with a moderate fire make the Diſtillation, till the humidity of the Roſes be almoſt all diſtill'd. After which, the Veſſels being cool'd, and the ſettlement empty'd out, put more fermented Roſes into the Cucurbit, and ſo pour the diſtill'd Water upon them, and renew the Diſtillation till you have no more Roſes left. Then putting one part of the diſtill'd Water into a Matras with a long neck, cover'd with its head well luted, and having fitted a Recipient to it, well luted after the ſame manner, make a rectification in *Balneo Mariæ* with a moderate fire; and having diſtill'd about the twelfth part, which is the ſpiritous and inflamable part, put it up into a Bottle very well ſtop'd; keeping very carefully apart the Water that remains in the Matras, which will be very odoriferous. Then continue to rectifie, at ſeveral repetitions, all the Water diſtill'd, and having mingl'd together all that is aſcended of ſpiritous, make a new rectification in an Evaporating Bath, in a Matras with a long neck perfectly well luted; by this means you ſhall have an inflamable Spirit, which may be call'd an Ethereal Oil of Roſes, charg'd with their volatile Salt; as much to be commended for its pleaſant and penetrating odour, as for its vertues. Add the remains of this rectification to the reſt you have made, and keep them together in Glaſs

Bottles well ſtop'd, as a Roſe-water much better then you can draw forth by ordinary means.

Keep theſe Bottles for ſome days in the Cellar, where the Oil will aſcend by degrees to the top of the Water, and ſwim above it in little flakes, almoſt like Snow; whence you may ſeparate it by ſtraining it through a fine Linnen Cloth, and taking up the Oil with a little Silver Spoon. Put this Oil at the ſame time in a double Glaſs Bottle well ſtop'd, and keep it for your uſe, returning the Water into the Bottles whence you took it out, and ſtopping them up cloſe again.

The diſſolution which the Ethereal and inflamable Spirit of Roſes makes of the oily parts, during fermentation, and the ſimilitude of the ſubſtance between them, is the reaſon that it unites to it ſeveral parts thereof in Diſtillation; and that you find much leſs Oil among the Roſe-water after rectification, then by proceeding otherwiſe. And therefore, they that rather deſire the Oil, then the inflamable Spirit, will ſooner obtain their deſire, by re-diſtilling ſeveral times their Roſe-water upon new Roſes; for by that means they may ſeparate much more Oil, then from a greater quantity of Roſes after fermentation.

Some, to extract the ardent Spirit of Roſes, content themſelves with ſome days maceration; after which, having added an equal weight of Wine to that of Roſes, they make the Diſtillation. This in truth is a ſhorter and more eaſie method. But then the inflamable part of the Spirit muſt be rather attributed to the Wine then to the Roſes; whoſe Spirit is not able to disingage it ſelf from the other ſubſtances, as not having been ſufficiently fermented. Nevertheleſs this method is not to be rejected for the preparation of the ardent Spirit of ſeveral parts of Plants; which looſe much of what they have of uſe, in ſtaying too long for their fermentation; or may be ſubject to conſiderable alterations of their qualities, by the addition of other aſſiſtants which are made uſe of to advance fermentation. But for this I think it beſt to let it alone; provided care be but tak'n of proceeding as I have directed; becauſe the Roſes have in themſelves that acid which is neceſſary to provoke fermentation, without being put to borrow any aſcititious ferment, or that there ſhould be any fear of any conſiderable diſſipation of their volatile parts. We muſt alſo believe, that that acid having left the proper ſubſtance of the Roſes, after it has disingag'd the volatile Salt and ſulphury Spirits from the groſſer ſubſtances, unites it ſelf ſtrictly to them, and is to be found mix'd with them, after the ſeparation of the reſt by Diſtillation from the groſſer parts, unable to aſcend.

The uſe of Roſe-water, both inwardly and outwardly, is ſo well known, that it is needleſs to inſiſt upon it. The ardent Spirit of Roſes is ſo odoriferous and ſo peircing, that one drop alone is enough to perfume a full Glaſs of common water. It is excellent againſt weakneſſes, faintings, and palpitations of the heart. The doſe is from three or four drops to fifteen, twenty, and thirty, in its own proper Water, in Wine or Broth, or in ſome other Cordial Liquor. It is alſo apply'd to the Stomach, to the Region of the Heart, to the Temples, to the Wriſts, and to the Soles of the Feet in fainting fits. It is given with ſucceſs in malignant Fevers. It may be us'd alſo to provoke ſweat, given in ſeven or eight ounces of Carduus-water. The Oil works the ſame effects as the Water; but be not too prodigal of it, becauſe of its rarity. It is giv'n inwardly, from one or two to five or ſix drops; being incorporated with ſome few drams of fine Sugar powder'd, and diſſolv'd in its own proper Water, or in the ſame Liquors as the Spirit. You may alſo incorporate it with preſs'd Oil of Nutmegs, and make thereof a Balſom of Roſes very odoriferous. The Oil and Spirit of Roſes are equally uſeful for men and women; only it muſt be kept from them who cannot endure ſweet ſmells.

You may draw by the ordinary way from the remains of all the Diſtillations, a purgative Extract; and by burning the ſediment, and reducing it to Aſhes, extract the Salt to keep it apart, or mingle with the Extract. The doſe of the Extract is from half a dram to two or three drams, to be giv'n either in a Bolus or elſe in ſome proper Liquor. It is alſo mingl'd with other purgatives, putting in more or or leſs according to the quantity or doſe of thoſe things which you mingle with it. The doſe of the Salt is from half a ſcruple to half a dram, and ſometimes one dram, in ſome proper Liquor.

Musk Roſes (call'd Damask Roſes), Dogs Roſe, White Roſes, and all the other ſorts, may be diſtill'd in the ſame manner as the Pale Roſes; and you may extract

from

from thence almoſt the ſame ſubſtances; though you may obſerve in them conſiderable differences, as well in their quantity as quality, by reaſon of the ſeveral proportions of the parts that compoſe every Roſe, and their ſeveral knittings and compactures; the difference whereof is ſenſibly manifeſted by the diverſity of ſmell, colour, and form.

CHAP. XII.

Of the Diſtillation of Lavender *Flowers.*

THE Flower of Lavender has too little Juice to think of diſtilling it to the purpoſe, without adding to it ſome other Liquor. For what you could draw from thence in a Glaſs Alembick, or a *Balneum Mariæ*, or in a Roſary in a moderate Bath of Aſhes, would hardly recompence the time and trouble you muſt expend. Only you muſt be careful in pouring upon the Flowers ſome proper Liquor, but above all to chuſe the Water of the ſame Flower, which you may have left of the laſt year; or for want of that, ſome other Cephalick Water.

Having gather'd your Lavender upon a fair day, about noon, when it is well in Flower, take only the Flower in the Ear, and ſo cleanſe it, that the hard bottom of the Flower, which helps to ſuſtain and form the Ear, may be taken away, and only the pure Flower remain. For example, take ſix pound of the Flowers, thus cleans'd, and having put them into a great Copper Veſſel Tinn'd within, plac'd in its proper Furnace, and having pour'd upon them twenty pints of their own proper Water, or ſome other Cephalick, cover the Veſſel with a Moors-head well Tinn'd within, furniſh'd with its Serpentine Tinn'd in the ſame manner, and running along a Tunnel of cold water; then having luted well all the jointures, and the end of the Serpentine with the Recipient, kindle in the Cinder-place of the Furnace a very ſmall fire, enough only to warm the ſubſtances, and to maintain them in their moderate lukewarmneſs; and having continu'd them ſo for three or four natural days, kindle a Charcoal fire in the Hearth-place of the Furnace, ſo that the Water which diſtills may fall, not in drops, but in a continu'd ſtring, till you have drawn out by Diſtillation about two thirds of the Water which you have made uſe of. Then let the Veſſels cool, and having ſeparated them, and put the Oil that will ſwim upon the ſpiritous diſtill'd Water into a Bottle apart, and having alſo ſtrain'd and preſs'd out that which remains in the Veſſel, put in again the like quantity of freſh Flowers; and having pour'd upon them not only the ſpiritous diſtill'd Water, ſeparated from its Oil, but alſo the Liquors preſs'd out of the ſubſtances which remain'd after Diſtillation, put on the Moors-head again, with the Serpentine and Recipient, and lute them all well, and after a maceration of three or four days, diſtill off the Water and the Oil as before, and make the ſame ſeparation. You may alſo pour the ſame Water, and the Liquor preſs'd from the remains, upon freſh Flowers, if you have them ready, and make a new Diſtillation, and repeat the ſame ſeveral times. Though it be true, that after two or three cohobations of the Water upon the freſh Flowers, the Water will be charg'd as much as is neceſſary with the ſpiritful parts of the Flowers of Lavender; there being no advantage in theſe reiterated cohobations, but to draw forth the greater quantity of Oil.

You may draw forth an Extract from the remains of theſe Diſtillations, proceeding after the ſame method which I have already deſcrib'd. You may alſo extract a Salt from the ſediment preſs'd, dry'd, burnt, and reduc'd into Aſhes, though it will not be very much, no more then in any other odoriferous Cephalick Flowers, which abound more in ſulphury and in ſome volatile Salt parts, then in fix'd Salt.

The doſe and uſe of this Extract and Salt is almoſt the ſame with them that went before. The diſtill'd Oil of Flowers of Lavender is very much commended for the Epilepſie, Apoplexy, and Palſie, and in general, for all diſeaſes of the Brain,

giving from two drops to ſeven or eight, incorporated with fine powder'd Sugar, and diſſolv'd in its own Water, or in ſome other Cephalick which may aſſiſt its vertues. You may alſo put it up into the Noſtrils, apply it to the Temples, and to the Sutures of the Skull; and alſo incorporate it with Oil of Nutmegs, and make a Lavender Balſom, to mix with Apoplectick Balſoms, as other diſtill'd Oils are mingl'd.

If inſtead of the diſtill'd Water of Lavender, or any other Cephalick, you uſe the like quantity of good Wine in Diſtillation of theſe Flowers, you may draw forth an ardent Spirit very penetrating.

CHAP. XIII.

Of the Diſtillation of Flowers of Roſemary.

THE Flowers of Roſemary, well cleans'd from their Cups, and whatever there is of green in the Flower, are of a ſubſtance ſo little compacted, and the parts which you deſign ſhould aſcend in Diſtillation, are ſo ſubtle, ſo volatile, and ſo looſe from the groſſer parts, that I ſee no reaſon for thoſe that have allow'd it the preparation of the Queen of *Hungary*'s Water, which is the moſt common Diſtillation of the Flowers of Roſemary, to make a maceration for three days in the Spirit of Wine, or to put themſelves to the trouble to ſeek out Veſſels proper for that uſe, and after that to proportion a fire of digeſtion, during all that time, ſeeing that one maceration made in the cool of the morning, in the Cucurbit which you uſe for Diſtillation, is of power ſufficient to cauſe the Spirit of Wine to penetrate into the very heart of the Flower; as alſo for that the volatile parts aſcend more eaſily with the Spirit of Wine. I believe rather that theſe far fetches about, were only invented to puzzle young beginners, and to make that Diſtillation ſeem hard to them which is very eaſie, eſpecially when you have good Spirit of Wine, and Roſemary Flowers that are every way in their prime.

Having caus'd your Roſemary Flowers to be gather'd in a fair day, two or three hours after Sun-riſing, and having cleans'd them from all the green part, weigh out four pound, and put them into a large Glaſs Cucurbit with a ſtrait neck, and having pour'd upon them ſix pints of Wine well rectify'd, after you have preſs'd down the Flowers into the Wine, and cover'd the Cucurbit with its head, lute well the jointures, and place it in a Sand Bath, and having fitted and luted a Recipient to the beak of the head, leave the Veſſels in that condition all night long; in the morning kindle a fire under the Bath, and order it ſo, that while the Spirit diſtills, the head may not be ſo much as warm; you may alſo cover the head with a Linnen Cloth, doubl'd ſeveral times, and dipp'd in cold Water, and re-dip the Cloth and cool the head from time to time, to haſt'n the diſſolution of the vapours that aſcend. Continue this Diſtillation till you have drawn forth about four pints of Spirit, which will be very pure, and charg'd with the beſt and moſt volatile ſubſtance of the Flower. Then cool the Bath, unlute the Veſſels, and put the diſtill'd Spirits into a Bottle well ſtop'd; then ſtrain and preſs forth the Liquors that remain in the Cucurbit; and having clarify'd the Liquor, and return'd it into the Cucurbit, cover'd with its head, and the Recipient ready, renew the Diſtillation in the ſame Sand Bath, and continue it ſo long till you ſee the Liquor very near as thick as a Rob. After which, having cool'd and unluted the Veſſels, turn out the Liquor into a Pipkin well glaz'd, and boil it over a gentle fire to the thickneſs of an ordinary Extract; keep every Liquor apart, the firſt of which will prove the beſt, and the moſt piercing.

This is the Spirit to which our Moderns have giv'n the name of the Queen of *Hungary*'s Water; by reaſon of the wonderful effects which a Queen of *Hungary* receiv'd by it at the age of ſeventy-two years. This is that Water, the great reputation whereof, and the great vent for it at *Paris* for many years ſince, has caus'd ſeveral perſons, as ignorant as wicked, to prepare it after their manner,

ner, in the Provinces where Roſemary Flowers abound, and where you may have the Spirit of Wine very cheap; and who inſtead of making uſe of the Flowers of Roſemary well cleans'd, as they might eaſily do, leave a great part of the Herby part, which makes the ſcent of the Water ſtronger, but more tart and unpleaſing, as well as the taſte; and who inſtead of the Spirit of Wine well rectify'd, make ordinary *Aqua Vitæ* ſerve their turns; deluding by means of the ſtrong ſcent of the green parts mingl'd with the Flower, upon the credulity of perſons not able to diſtinguiſh the aſcititious ſtrong ſcent from that of the Flowers, which ought to be ſweet and pleaſant; and impoſing the ſharp and harſh taſte of the ſame parts for the penetrating taſte of the Spirit of Wine well rectify'd. Neither is it to be wonder'd at, that theſe abuſers of the people to their faces, ſhould gain ſo much by this Water, and ſell more then they that prepare it with ſo much fidelity and skill, who are not able to ſell it at ſo low a rate, without great loſs.

The Spirit of the Flowers of Roſemary well prepar'd, is good againſt all cold diſtempers of the Brain. It is alſo an excellent remedy againſt the cold diſeaſes and affections of the Nerves and Joints, againſt Rheumatiſms and cold Gouts. It diſſipates the pains of the Head caus'd by Flegm, diſſolves the vapours that cauſe Vertigo's, fortifies the memory, helps deafneſs and noiſes in the Ears, as alſo weakneſs of ſight. It heals contuſions of the Head and all parts of the body, and prevents the coagulation of the Blood in thoſe parts; diſſolving the coagulation, and cauſing it to tranſpire. It aſſwages the Tooth-ach, it fortifies the Stomach, preventing the looſeneſs and weakneſs of that and of the Bowels, by taking away the ſharpneſs of the acids, which are uſually the cauſe thereof. It creates an appetite, helps digeſtion, and opens obſtructions of the Liver, Spleen, and all the Bowels, as alſo of the Matrix, the vapours whereof it ſuppreſſes. It claims a power to preſerve and revive the natural heat, and to reſtore the functions of all the parts of the body, and to make old men young, that is to ſay, to eaſe them of a great many of thoſe diſeaſes that attend upon old age.

It is giv'n inwardly from a ſcruple to one dram, in Wine or ſome Cephalick Water or Cordial. Some drops may be ſnufft up into the Noſtrils, lay'd to the Temples, and to the Sutures of the Skull. It is apply'd upon contuſions by the means of little pillows dipt therein. It is apply'd to Rheumatiſms, and to all ſorts of pains and defluxions, as alſo about the Eyes to fortifie the ſight, and dropt into the Ears for the cure of ſuch diſtempers as happ'n therein. It is made uſe of to waſh the Face, the Neck, the Arms, the Hands, alone or mix'd with the Water of wild Tanſie, Lillies, Water-Lillies, the Spawn of Frogs, and ſuch like, to preſerve the complexion of the Beauty, and prevent wrinkles. In ſhort, there is hardly any remedy is to be found, that produces ſo many and ſo good effects, as this Spirit.

The Liquor which is preſs'd forth and diſtill'd, not poſſeſſing the more volatile parts of the Flower of Roſemary, which the firſt Diſtillation has tak'n away, and finding it ſelf charg'd with the watry part which aſcends with the Spirit of Wine that remains at the bottom of the Veſſel, is neither in truth ſo pure, neither has it the ſame vertue as the firſt Spirit. But it deſerves to be preſerv'd, in regard it alſo contains ſeveral parts leſs volatile of the Flowers, which the laſt Spirit of Wine carry'd with it, and which may produce good effects, by ſtaying longer in the Stomach then the former. It may ſerve for the ſame uſes as the former, eſpecially inwardly; but then the doſe muſt be doubl'd, by reaſon of the watry part which is mingl'd with it. There may be alſo an Extract prepar'd of the Liquor which remains, which is very ſerviceable in Cordial, Stomachical, and Cephalick remedies, giv'n in the ſame doſe as the other Extracts.

You may diſtill the Flowers of Petty Mugget, Sage, the Line-tree, *French* Lavender, and the like, proceeding according to the ſame method ſet down for the diſtilling of Roſemary and Lavender Flowers.

CHAP.

CHAP. XIV.

Of the Distillation of the most odoriferous Waters which are to be drawn from the Flowers of Vegetals.

THE methods which I have set down for the Distillation of the several parts of Plants, are much better then any of those which Chymistry usually puts in practise. But in regard the Commands of *Monsieur D' Aquin*, First Physitian to the King, have engag'd me to communicate to publick, several things which I thought to have reserv'd to my self, I freely impart what I have found to be best and most curious in these particulars.

You must be careful to distill Dew in its season, and keep the spiritous Water in a Bottle well stop'd. You must be careful to gather together in the month of *May* or *June*, in fair weather, good store of Cows-dung or Ox-dung, dry'd of it self in the meadows, where those creatures have been feeding. This Dung contains in it the first principle of the Herbs which the Oxen or Cows have eaten; but it has lost the seminal vertue; the smell thereof being somewhat like the smell of Musk. The use thereof is well enough known, since the Water has been distill'd from time to time, and goes by the name of the Water of a thousand Flowers, because of the great number of Herbs and Flowers that were in the first matter of the Dung from whence it was distill'd. Make choice in their season of such Flowers as you would distill, and having laid them in beds or layers in a great and large Cucurbit, with equal portions of this Dung dry'd and pulveriz'd, and having water'd every layer one after the other, with the spiritous Water of Dew, and continu'd the watring and the stratification till the substances take up almost the half of the Cucurbit, cover it with its Glass-head, and having carefully fitted and luted it, together with the Recipient to its beak, make a Distillation thereof only by the heat of the Sun in the Summer, till the moisture be almost all distill'd out. Then about midnight, or at least two hours before Sun-rising, unlute the Vessels (the choice of this time being absolutely necessary, if you intend to preserve a good odour in the Water); and having at the same time got ready new Flowers in another Cucurbit of the same likeness, and pour'd the distill'd Water upon the Flowers, put on the head, and after you have well luted it, as well as the Recipient, make a Distillation thereof in the Sun, as at the first time. Then unlute the Vessels in the night, cohobate or sprinkle the distill'd Water upon new Flowers, till the Water be perfectly odoriferous. You must so order it, that neither the head nor the Recipient may be expos'd to the Rays of the Sun during Distillation, and that only the Cucurbit may be hot. You must also cover the head with a Linnen Cloth, several times doubl'd, often dipp'd in cold water, to advance the dissolution of the vapours that ascend with the matters. Cows-dung and Spirit of Dew, are very necessary in the first Distillation of Flowers, but not in the latter. And in case it be a difficult thing to have the heat of the Sun so strong, as in some Northern Climates it may fall out, there an Evaporating Bath must serve turn, or a Bath of heated Air, if you have the convenience. By this means you shall have Waters perfectly odoriferous; of which one ounce will afford more good scent then ten times as much of those that are distill'd the ordinary way.

CHAP.

CHAP. XV.

Of the Distillation of ardent Spirits very odoriferous, which may be drawn from odoriferous Flowers and Herbs.

WE must believe, that though the Flowers have in themselves those advantages which we do not observe in other parts of the Plants which produce them, they are nevertheless very subject to dissipation, by reason of the tenuity of their substance. And though we may in some measure reap the advantage of their good scent, and of many other excellent qualities which they contain, by the several helps of Chymistry daily practis'd. However it is a very difficult thing to draw from all sorts of Flowers ardent Spirits well scented, if you do not search in the Plant it self for the basis and foundation of the odour of the Flower; and if you make not use of fermentation, which is as it were the Soul of the Spirits of Vegetals, as putrefaction is the Soul of their Oils.

You must add to wild Roses their fruit call'd the Hep, containing the Seed; and to the manur'd Roses theirs, well bruis'd. To the Flowers of Sage, Rosemary, Marjoram, Mint, Betony, Balm, Lavender, Thyme, *French* Lavender, Gillowflowers, Violets, Jelsomine, *&c.* their Seeds well bruis'd. To the Flowers of Lillies, Flower-de-luces, Piony, Angelica, *&c.* their Roots and Seeds bruis'd and stamp'd. To the Flowers of Oranges, Limons, and Citrons, the Fruits well stamp'd. To the Flowers of Petty Mugget and Elder, their Berries well stamp'd.

There is no necessity to add any moisture of another nature, to any of these, which have moisture enough in themselves, or in their Fruits or Berries. But there is a necessity of adding a little Spirit of Wine, or some other Liquor, as also a little Leaven of Bread or Yest, when the Flowers mingl'd with the Seeds have not moisture enough in themselves to make up a mass reasonably soft, and fit to be fermented. To accomplish your design therefore, you must stamp the Flowers with their parts which are to sustain them, and be as it were a foundation to them; and if they be but soft enough to be penetrated by the acid ferment, which naturally breeds therein, put them into a great Pitcher of Potters Earth, and fill it well, often pressing and squeezing the substance down; but if the mass be not soft enough, add to it a little Wine, or Water of the Flower distill'd the ordinary way, having first steep'd a little Leven therein to hast'n fermentation; then having carefully stop'd the Pitcher with a Cork and yellow Wax melted, give it time to ferment, which will dispose the spiritous parts to separate from the gross; and when the Spirits have attain'd a kind of scent like Wine, and somewhat sowre, make the Distillation thereof in *Balneo Mariæ*, in a Glass Cucurbit, cover'd with a well luted head, and receive the ardent Spirit into the Recipient, after you have fitted it and luted it well. By this means you shall have an ardent Spirit, extraordinarily charg'd with the odour of the Flower; which you may afterwards distill, if you please, upon new Flowers, without the addition of other parts, and keep it a long time in its perfect goodness, in a Bottle very well stop'd. Roses afford so great a plenty of odour, that it is no wonder, that a man need take so little care for the conjunction of the parts, of which I have spok'n, for the Distillation of their ardent Spirit. But though you may draw from them that Spirit, proceeding as I have said when I have spoke of their Distillation, yet that Spirit will be more powerful and more plentiful by adding their Hep to them.

But because it is not always possible to have ready the Seeds, Berries, Roots, and other parts of Plants, which may serve as a foundation for the Flowers which you intend to distill, you must have recourse to some extraneous substance, though homogeneous, which joining its Salt, Sulphur, and Mercury to the Flowers, may retain and unite to it self their odour, and whatever they have of sulphury and inflamable, by means of the fermentation; and which serving them for a foundation, may afford and join its Spirits to those of the Flowers in Distillation.

Manna,

Manna, Sugar, and Honey are equally proper for theſe uſes. You may make uſe of that which you have next at hand. The proportion muſt be one part of one of the three, to ſix parts of the Flower, out of which you would extract the inflamable Spirit. You may make an exact union, by adding alſo, if it be neceſſary, a ſmall quantity of ſome other liquor, and a little Leven, proceeding over and above in the ſame manner for fermentation and Diſtillation of the Flowers with the Seeds and other parts of the Plants, according to the method already preſcrib'd. You muſt be careful to lute exactly the jointures of the Veſſels, as well in fermentation as in Diſtillation, to ſave all the Spirits. You may do well to diſtill them alſo upon new Flowers, to the end they may be the ſtronger in ſcent and other good qualities.

You may according to this method, draw forth the odorous and inflamable Spirit from all ſorts of Aromatick, as alſo from all odoriferous Plants.

CHAP. XVI.

Of the Diſtillation of Seeds and Berries; and in the firſt place of Anniſeſeed.

GEnerally we make Infuſions and Decoctions, rather then Diſtillations of moſt Seeds, which being accounted cold, or at leaſt temperate, abound in watry and muſcilaginous parts, diſſoluble in homogeneous Liquors, or which have a ſuperfluity of oily parts accompany'd with an aquoſity, which may eaſily be ſeparated from the groſſer by expreſſion, and without fire, extracting the emulſion thereof with proper Liquors. We acknowledg the Seeds of Mallows, Marſhmallows, Quinces, Fleawort, *&c.* to be watry muſcilaginous Seeds; thoſe of Cucumbers, Melons, Gourds, Lettice, *&c.* to be oily. Sometimes we ſqueeze out an Oil by expreſſion from hot Seeds. But not to ſpeak of preparations here, which I have ſpok'n of in the Galenick part, I will only ſhew you the Chymical Diſtillations of the moſt principal Seeds, beginning with Anniſeſeed.

You may proceed ſeveral ways to the Diſtillation of Anniſeſeed, according to the different intentions which you propoſe to your ſelf. For ſometimes it is enough to mix two or three pound with fifteen, twenty, or thirty pints of *Aqua Vitæ*, and to make a ſimple Diſtillation by a Refrigerant, or in a Veſſel of Copper Tinn'd, cover'd with a Moors-head, and fitted with a Serpentine, to have a Spirit of Wine ſtrong of the Anniſeſeed, which is call'd Anniſeſeed-water. But if you deſire to have by the ſame Diſtillation, the Water, Spirit, and Oil, charg'd with their volatile Salt, you muſt proceed thus:

Take for example, twelve or fifteen pound of Anniſeſeed, while it is yet green, or at leaſt the greeneſt you can get; and having bruis'd it, and put it into a great Copper Veſſel well Tinn'd within, pour upon it Rain or River-water, or which is better, diſtill'd Anniſeſeed-water, till it ſwim above the Seed four good fingers breadth. At the ſame time, place the Veſſel upon its Furnace, and having cover'd it with its Moors-head, and fitted and luted on the Serpentine, croſſing a great Pipe full of cold water, and alſo fitted and luted a Recipient to the Serpentine, kindle a ſmall fire in the Cinder or Ember-place, enough only to heat the ſubſtances never ſo little, and only to cauſe the Water inſenſibly to penetrate the ſubſtance of the Anniſeſeed. Continue this heat for the ſpace of three natural days, to make a kind of putrefaction of the Anniſeſeed. After which, having kindl'd a fire in the Hearth-place of the Furnace, begin your Diſtillation, and continue it with a moderate fire, till two thirds of the Water be diſtill'd off, which you put with the Anniſeſeed into the Veſſel; at which time take away the fire, and having unluted the Recipient, and ſeparated and ſet apart in a double Glaſs Bottle well ſtop'd, the Oil that will ſwim upon the ſpiritous Water diſtill'd; when the ſubſtances are cold, empty the Veſſel, and ſtrain and preſs out the remainder. Then, having put into the Veſſel as much more bruis'd Anniſeſeed as at the firſt, and pour'd the

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diſtill'd Water upon it, and the Liquor preſs'd out of the remainder; cover, lute, and fit the Veſſel, Serpentine, and Recipient, as before; and proceed in all things as in the firſt Diſtillation; and ſeparate the Oil from the ſpiritous Liquor. You may pour the diſtill'd Water and Liquor upon the new Anniſeſeed; repeating the ſame as often as you find it convenient. For by this means you ſhall have as much more Oil, and a ſpiritous Water more plentifully charg'd with the ſcent and good qualities of the Anniſeſeed.

The reiterated ſprinkling of the diſtill'd Water upon the new Seed, is that which makes more Oil then you would have by the ſprinkling of new Water, which would always retain to it ſelf ſome little quantity. Nor would it be amiſs to take the ſame courſe upon other occaſions. Nevertheleſs you may, if you pleaſe, ſeparate that little Oil from the Water diſtill'd, by putting it in a double Glaſs Bottle very well ſtop'd, and expoſing it to the hot Sun for ſome days. For by this means that portion of the Oil which is mixt among the Water, and gives it a whitiſh colour, will aſcend to the top of the Water, and gather together at the neck of the Bottle, from whence you may ſeparate it.

Some there are, that mingle an ounce of Niter, or Sal Tartar, or raw Tartar in powder, with every pound of Anniſeſeed, when they go about to diſtill it; pretending this way to get more Oil. But they that conſider the aptneſs of Oils to join themſelves to the fix'd Salts, as you may obſerve in the making of Soap, may well think, that theſe Salts, not being able to mount, fail not to retain to themſelves ſome part of the Oils; ſo far are ſuch practitioners from obtaining a larger quantity of Oil by that device.

And becauſe we diſtill Anniſeſeed rather for the Oils ſake, then for its other good parts, you may draw forth more then is uſual, by putting the Anniſeſeed bruis'd, with its Water diſtill'd, into a Glaſs Cucurbit, cover'd with a ſtrong Veſſel well luted, and placing the Cucurbit in Horſe-dung, as high as the ſubſtances, leaving it there for fifteen days, or three weeks. For by the putrefaction which will happ'n to the Anniſeſeed, the oily parts will be better ſeparated, and you ſhall have more Oil then by any other way.

The Oil and ſpiritous Water of Anniſeſeeds is very much commended in all cold diſtempers of the Stomach and Bowels, and particularly in windy Cholicks; it is no leſs commended for the creating an appetite, and helping digeſtion. It is very ſucceſsfully us'd in diſtempers of the Breaſt, when there is any occaſion to cut and looſen the viſcous Flegm that ſticks to the Lungs. They are alſo very proper to increaſe milk in Nurſes, to diſſipate the wind of Dropſies, to ſtay the irregular motions of the Matrix, and to facilitate the Birth; to aſſwage the ſharp pains of little Infants, and to eaſe the pains and noiſes in the ears, proceeding from wind and cold humours. The Oil is given in its proper Water, from two drops to ſeven or eight; being incorporated with powder'd Sugar. The Stomach or Navil may be anointed therewith; it may be dropt into the Ears, mixt with Oil of ſweet or bitter Almonds, or with ſome Cephalick Water.

The Seeds of Fennel, Caraways, Cummin, Dill, Hartwort, Smallage, Biſhopsweed, and the like, may be diſtill'd the ſame way as Anniſeſeed; and you may draw from every one, according to its kind, ſubſtances not much unlike to thoſe which you draw from Anniſeſeed. But you muſt expect leſs Oil; the chief reaſon whereof is, becauſe you never make uſe of theſe Seeds when they are green, but when they are dry, and ſometimes very old.

CHAP. XVII.

Of the Diſtillation of the Seeds of Scurvygraſs, Muſtard, *and* Creſſes.

IT is not to be wonder'd at, that the Spirits, Oil, and volatile Salts of Plants, aſcend uſually one among another in Diſtillation, in regard they have very much affinity and aptitude to join together, and that it is alſo impoſſible to ſeparate them in ſuch manner, but that they will retain ſome particles the one of the other; beſides, that there will be ſome Flegm mixt among them. The volatile Salt, more eſpecially, is ofttimes ſo intermix'd with the other ſubſtances, that it is a very difficult thing to part it; or diſcern it either, unleſs it be very plentiful, and manifeſt it ſelf by the ſmell. Sometimes there is ſo ſmall a quantity in ſeveral watry Herbs, accounted cold, that there is no way to diſcover it, much leſs to ſeparate it. You may obſerve in the Diſtillation of ſeveral hot Seeds, particularly of Spoonwort or Scurvygraſs, Muſtard, Creſſes, and ſuch like, the mixture of their Oil, Spirit, and volatile Salt; which are their moſt conſiderable parts. You may alſo make a ſeparation thereof, but not purifie them ſo, but that there ſhall remain in every one of them ſome particles of one another. So that it is no great difficulty to underſtand the parts that predominate in thoſe Seeds, becauſe that while you champ them, they fill your Palat with their piercing and penetrating parts; which are the certain evidences of their volatile parts, more eſpecially of the ſalt and ſulpury, that are ſo ſmart upon the ſenſe of ſmelling, and aſcend to the Brain with a more than ordinary violence.

Several ways are to be us'd for the Diſtillation of theſe Seeds. For ſome, after they have well bruis'd ſuch a quantity of Seeds, as they intend to diſtill, and have fill'd therewith two thirds of a large Pitcher, made of Potters Earth, pour upon it Rain or River-water lukewarm, till it ſwim two or three fingers breadth above the Seed; then having ſtopt the Pitcher exactly, they ſet it three natural days upon a Bakers Oven, there to ferment; then having pour'd it all out into a Coppel Veſſel Tinn'd, with all the jointures of the Moors-head, Serpentine, and Recipient well luted. They make a Diſtillation thereof, over a moderate fire: And in the firſt place, they draw forth the Spirit, Oil, and volatile Salt, mix'd together; together with a little Flegm, which they will raiſe along with them; then continuing the Diſtillation for ſome time, they draw forth a Water yet more charg'd with the three principles, very proper not only in Scorbutick Diſtempers, but alſo to pour again upon more new Seeds, to make a new Diſtillation. They ſeparate the Oil, and keep it apart in a double Glaſs-Bottle well ſtopp'd; as alſo the Spirit, which is well laden with the volatile Salt, of which the Oil alſo is not unprovided.

Others pour good White-wine upon the bruis'd Seed, inſtead of Rain-water or River-water, and giving the Wine but juſt time to penetrate the Seed, they only make a maceration from the cool of the evening till morning; then they diſtill the whole, as before.

Others having well bruis'd one ſort of theſe Seeds, and put them into a Glaſs Cucurbit, they pour upon them the Spirit of Wine well rectify'd; then having cover'd it with its head well luted, and fitted a well luted Recipient to the beak, they make the Diſtillation thereof in *Balneo Mariæ*, or elſe in the Bath of Aſhes, with a moderate fire; and they draw out an Oil and a Spirit very penetrating, and very ſtrong of the volatile Salt of the Seed.

But theſe Seeds may be diſtill'd to very great purpoſe, without any addition, and without bruiſing; by filling therewith two thirds of a Cornute or Retort of Potters Earth or Glaſs luted; for having plac'd it in a Furnace of Reverberation cover'd, and having fitted and exactly luted a Recipient to its beak. The Diſtillation may be made by a gradual fire, very ſmall at the beginning, but augmented by degrees, for ten or twelve hours together, to extremity of heat. By this means you ſhall find in the Recipient, the Oil, Spirit, volatile Salt, and Flegm

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mingl'd together, which you may afterwards rectifie in a Bath of Sand, with a moderate fire, in a Mattras with a long neck, cover'd with its head exactly luted, and furnish'd with a small Recipient fix'd to it in the same manner. By which rectification the volatile Salt will mount first, and coagulate like a white Chrystalline substance; from whence you may take it out if you please, unluting the head, and putting another luted in its place, and shutting up the Salt with great care and speed into a strong Glass-Bottle, so stop'd that no part of it may exhale, nor the moisture of the Air dissolve it into Liquor. Then go on with your rectification, separating and keeping apart the Spirit charg'd with the volatile Salt, which will always ascend first, as well as the volatile Oil, which will swim at the top, while the greatest part of the watry substance remains at the bottom of the Mattras, with the thickest and grossest part of the Oil, which may be thrown away by reason of its thickness and ill smell, though it may be well enough outwardly apply'd against cold pains.

It will be needless for me here to set down the vertues, doses, and uses of the Spirits, volatile Salts, and Oils drawn from the Seeds, no more then those of the spiritous Waters which follow in Distillation; in regard the same proportion will hold which I have already set down, speaking of substances, almost of the same nature, drawn from Scurvygrass. Yet I may say, that there is something to be got from these Seeds, better digested and more subtle then that which you can draw out of the Herbs, which have not attain'd to the perfection of Seeds. We ought to believe also, that the Spirit, volatile Salt, and Oil of these Seeds, may produce good effects in all manner of cold diseases of the Brain, and in those of the Nerves and Muscles, as also in Palsies. In which cases, you may not only use with success, in anointing the parts, the rectify'd Oil, but also that which was never rectify'd, and apply it either alone, or mix'd with *Unguentum Martiatum* or Human Grease, or with Oil of Vipers, or the Philosophers Oil, Oils of Lawrell, St. Johnswort, and the like.

Some use Leven to advance the fermentation of these Seeds. But there is no need of it, by reason of the abundance of subtle parts whereof they are compos'd, and their great inclination to quit the terrestrial parts, which are not many.

CHAP. XVIII.

Of the Distillation of Elder-Berries.

I Do not undertake to speak here of all Preparations that may be made of the greatest part of the parts of Elder; nor to give this shrub all the Encomiums it deserves, of which several others have sufficiently discours'd. For, not being willing to depart from my subject, I shall only content my self here to set down the particular Distillation of the Berries, and the way to save all their parts.

Having caus'd a good quantity of Elderberries to be gathered when they are full ripe, and having cleans'd them and bruis'd them, press out the Juice; and having fill'd therewith a little oaken Barrel, set it in the Cellar to ferment: as if it were Wine. And then when you perceive that the Juice has acquir'd a winish odour, somewhat intermixt with acid, tap the Barrel a little above the Fæces, and having drawn out the clear juice, put it into a Copper Vessel Tinn'd within, and having cover'd it with a Moors-head well luted, and having fitted to its beak a Serpentine luted, crawling along a Pipe fill'd with cold water, and a Recipient at the end of the Serpentine, make the Distillation with a moderate fire; and keep apart the ardent and penetrating Spirit, which will first ascend, till you have distill'd about two thirds of the Juice which was put into the Vessel. At which time give over the Distillation, and put up the distill'd Spirit very close; and then having cool'd the Vessels, pour out by inclination into a woollen Bag, the Juice that remains in the Vessel, to separate it from the sediment. Then, putting the clear Liquor into an Earthen Pipkin glaz'd within, evaporate the superfluous moisture over a very gentle fire, which you must continue till the Juice be as thick as an Extract, which is to be put up into a Glass Pot well cover'd.

In the mean time take care to expoſe to the Sun, or to the Air, the ſediment of the Berries, to ſeparate the Grains, which you may make good uſe of by ſtamping them, and preſſing out an Oil proper to provoke an eaſie vomit; which may be given from half a dram to a dram and a half, in Broth, in Beer, or in any other proper Liquor.

The Spirit of Elder is very much commended againſt cold diſtempers of the Brain. It is Diaphoretick; it purifies the maſs of the Blood, and facilitates circulation; it reſiſts the putrefaction of humours, and expels the malignity of Fevers and Poyſon. It eaſes thoſe that are troubl'd with the Gout and Dropſie. It opens the obſtructions of the Matrix, and ſuppreſſes the vapours thence ariſing. It is given in its own proper Water, or in ſome Water of the ſame nature, from half a dram to two drams. The Extract may be alſo giv'n in the ſame doſe, in Bolus or diſſolv'd in its own Water, or mingl'd with the Spirit, for the ſame diſtempers for which the Spirit it ſelf is commended. You may alſo burn and reduce the ſediment to Aſhes, and extract a Salt from it, to mingle with the Extract, or to diſſolve in the diſtill'd Water, to augment its vertues. You may alſo make the ſame preparations of the Berries of Dwarf-Elder, or Danewort.

CHAP. XIX.

Of the Diſtillation of Juniper-*Berries.*

THE Berries of Juniper, being of a ſubſtance that contains not much of moiſture, you cannot draw forth the Juice to diſtill, as you do from Elder-Berries. Whence it comes to paſs, that you muſt have recourſe to ſome foreign moiſture, and to vary your method according to the ſeveral ſubſtances which you deſire to draw from thence. For if you have a deſign to raiſe an ardent Spirit from theſe Berries, you muſt cauſe them to undergo a fermentation; and alſo add a ſmall quantity of Leven, Honey, Sugar, or Manna, to the Liquors neceſſary for the requiſite diſſolution and ſeparation of the ſubtle and volatile from the groſs parts. But this is to be conſider'd, that while you excite and cauſe this ardent Spirit to riſe, you ſhall not compaſs ſo much Oil as otherwiſe you might do, becauſe the fermentation carries the greateſt part of it into the ardent Spirit. Nor is there any doubt to be made, but that the Leven changes the nature and qualities of that which remains after Diſtillation; ſo that the Extract drawn from thence, will not be ſo well qualifi'd. But becauſe the vertues expected from the ardent Spirit will be much inferior to thoſe which you will meet with, by proceeding otherwiſe in the Diſtillation of the Berries; and for that by uſing a ſmall quantity of Spirit of Wine inſtead of Water, you may with more eaſe extract a Spirit as ſubtle, and of as great vertue, as that which is to be expected from fermentation; I think it the better way to follow that method.

Take five or ſix pound of Juniper-Berries, fully ripe, and full grown; and having bruis'd them in a Marble Mortar with a wooden Peſtle, fill up the beſt half of a Glaſs Cucurbit; and having pour'd upon them the Spirit of Wine well rectify'd, till there remain but one third part of the Cucurbit empty, cover it with a Veſſel of Rencounter, and having perfectly luted the jointures, put it in Sand, or upon a Bakers Oven, and leave it there for three natural days, which will ſuffice for the penetration of the Wine into the Berries, and for the diſſolution of their moſt volatile parts; then having unluted and tak'n off the Veſſel of Rencounter, and in its place luted on a head upon the Cucurbit, and fitted a Recipient to its beak, make the Diſtillation in a Sand-Bath, with a moderate fire, and you ſhall have a ſubtle inflammable Spirit, charg'd with the beſt and moſt volatile parts of the Juniper-Berries.

But you ſhall do better, and ſave at the ſame time all the beſt parts of the Juniper-Berries, proceeding after this method: After you have bruis'd a good quantity of theſe Berries, and fill'd about the two thirds of one or more large Pitchers of Potters Earth, pour in water between lukewarm and boiling hot, and

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ſtop them up well; and having let them ſtand eight days upon a Bakers Oven, make the Diſtillation in a Copper Veſſel Tinn'd within, and cover'd with a Moors-head carefully luted, having both the Serpentine and Recipient join'd to it; proceeding in the ſame manner as in the former Diſtillations; and continuing the Diſtillation till the Water that diſtills be almoſt inſipid. By this means you ſhall have a Water charg'd with the volatile Salt and ſpiritous parts of the Berries, accompany'd with a volatile Oil, white and odoriferous, which will ſwim at the top, which you may ſeparate by a Cotton-week, or by a Tunnel, or by ſome other Veſſel proper for theſe ſeparations, and keep apart in a double Glaſs Bottle well ſtop'd. You may, if you pleaſe, rectifie the Water in a Sand Bath, in a Cucurbit of Glaſs cover'd with its head well luted, and caſt away the part which is purely watry, which remains at the bottom of the Cucurbit after Diſtillation; or elſe pour upon new Berries the Water of the firſt diſtilling, and repeat maceration and Diſtillation as before. And by this means you ſhall have more Oil, and the Water will be more ſpiritous, and more abounding in volatile Salt.

But for as much as all the good parts of the Berries do not aſcend in Diſtillation; but that there remains conſiderable parts among the Water at the bottom of the Veſſel, eſpecially a kind of ſubſtance like Honey, accompany'd with the groſſer Sulphur and fix'd Salt of the Berries; therefore when the Veſſels are cool, ſtrain and preſs out the remainder, and having clarify'd the Liquor, pour it into a glaz'd Earthen Pipkin, and evaporate the ſuperfluous moiſture over a very gentle fire, till that which remains be as thick as an Extract, which will be very acceptable to the taſte, and ſomewhat Aromatical. You may alſo dry the Lees of the Expreſſion, and having burnt and reduc'd it to Aſhes, make a Lye with the Water; and having filter'd it, and conſum'd it to the coagulation of Salt, mix it with the Extract, keeping them together in a Gally-Pot well ſtopt.

The Oil and ſpiritous Water of Juniper-Berries, is very proper to free the Reins and Ureters from Gravel and viſcous matters, which ſtop the paſſages, and hinder the Urine from having its courſe. They are alſo very uſeful in all cold maladies of the Brain, and in ſcorbutick diſtempers. They are good to fortifie the Stomach, create an appetite, help digeſtion, reſiſt the putrefaction of the humours, and to kill the Worms in the body; as alſo to expel windy Chollicks, and all cold maladies of the Bowels.

The Oil is eſpecially commended againſt bad Air, the Peſtilence, and all Epidemick diſeaſes; nor is it leſs to be prefer'd againſt diſeaſes of the Matrix. The Oil is given in its ſpiritous Water, when it is not rectify'd, or elſe in Wine or Broth, from two drops to ſeven or eight, in the morning faſting, or a good while before meals. And you may continue the uſe thereof as you ſee occaſion; as alſo of the ſpiritous Water, which muſt be giv'n in a leſſer or greater quantity, as it ſhall be more or leſs rectify'd. The Oil is alſo outwardly apply'd with ſucceſs in diſeaſes of the Nerves, eſpecially in caſe of contractions. The Navel alſo may be anointed with it in Cholicks. It may be put into the Ears, to help deafneſs, and noiſe therein. It may be alſo put up the Noſtrils; and the Temples and Sutures of the Skull may be anointed with it, in caſe of Epilepſies and Apoplexies, *&c.*

As for the Extract of the Berries, *Helmont* had reaſon to cry it up for an excellent Purge, in regard it is really ſo, eſpecially when its fix'd Salt is added to it; for by fortifying the Stomach and the Bowels, it gently purges off bad humours. The doſe is from two drams to half an ounce, either in Bolus or diſſolv'd in ſome proper Liquor. It is alſo ſometimes mingl'd in Opiats, or in other opening and purgative medicines.

In the ſame manner you may make a Diſtillation of the Berries of Savine, Ivy, Myrtle, and the like.

CHAP.

CHAP. XX.

Of the Diſtillation of Wheat, Rye, Barley, *&c.*

THE daily uſe of theſe Grains for the nouriſhment of men and beaſts, gives us to underſtand, that they contain ſubſtances as eſſential as ſubtle, and proper to be convey'd to the moſt hidden and ſecret parts of our bodies; and their ability to produce their like, which they have common with all other Seeds, perſwades us, that they contain eminently, and as it were in the Epitome, all the beſt part of the Plants that bears them, ſince they produce Plants that periſh every year, only are perpetuated by their means.

The Mechanicks are ſufficient to juſtifie theſe Truths, not only in the baking of Bread, but in the brewing of Beer. For the artificial fermentation which the Baker procures in his meal, by reducing it into Dough, with hot water and the mingling of Yeſt or Leven with it, and afterwards by baking the Dough in his Oven, when the parts have been well divided by ferment, is that whereby the Bread becomes agreeable to the taſte, and good to eat; though it has need of the heat of the Stomach, and of its acid, or natural ferment, to produce the laſt fermentation, and by that, the moſt eſpecial diviſion of all its particles, that the moſt pure and moſt ſubtle may be convey'd to all the ports of the Body that have need thereof, and the thicker parts be expel'd into the Bowels, and by them be thrown out, as unprofitable Excrements.

As for the Beer, after the Brewers have artificially giv'n to the Grain a beginning of Germination; and afterwards join'd in one center, in the ſame Grain, the diſpoſition which it had to germinate, they ſteep it in groſs; then adding three times as much more not germinated, but ſteep'd as the other, they pour upon the whole firſt Water half boiling hot, and then cold, to ſeparate and diſſolve, as much as in them lies, the volatile parts of the Grain, and to give the whole a temperate heat. Afterwards when they have giv'n it its neceſſary raiſing, and ſtirr'd the whole with proper inſtruments, they cover the Veſſels diligently that contain the matters, and leave them ſo for four or five days, till the vapours that riſe begin to ſmell ſtrong, and have a winiſh, ſubtle, and penetrating ſcent, which is a certain mark of a perfect fermentation. Then is the true time to diſtill the ſubſtances in a Veſſel cover'd with a Moors-head, and to have an inflammable Spirit, charg'd with the Salt and volatile Sulphur of the Grain, and altogether as ſubtle and penetrating as that of Wine, perhaps equally well rectify'd. I could give a more exact deſcription of this particular, and might alſo adviſe thoſe that would be diligent in this part of Diſtillation, to be careful to provide themſelves of Rain-water, falling at the time of the Equinoxes, eſpecially the Vernal; but I thought it needleſs, becauſe they may find in ſeveral Authors, eſpecially in a Chymical Treatiſe of *Monſieur Le Fevre,* all the light that they have uſe of upon this occaſion.

I will only ſay, that there is a way with far leſs trouble to ſeparate the parts, of which Wheat, Rye, Barley, or any other Grain of the ſame nature are compos'd, by filling about two thirds of a crooked or bending Limbeck with the Grain which you intend to diſtill, and making the Diſtillation in a cloſe reverberating Furnace, with a gradual fire, following the Rules of Art. For by this means you ſhall find in the Recipient, the Spirit, the Salts, and the volatile Oils, deſcended through the beak of the Cornet, intermix'd with a good quantity of the Flegm, of which you may afterwards make a rectification upon a Sand Bath in a *Matras,* or Bottle with a long neck, cover'd with its head well luted, and by repeated rectifications procure a volatile white chryſtalline Salt, or at leaſt a Spirit very penetrating, containing the volatile Salt, which will be diſſolv'd therein. Which may well happen, by reaſon of the great diſpoſition which the volatile Salts have to diſſolve themſelves in Liquor, or elſe to diſſipate. Thus yon ſhall alſo have a volatile Oil, very penetrating, united to ſome particles of the volatile Salt.

You may attribute to the ardent Spirit, drawn from theſe fermented Grains, almoſt the ſame qualities as to that of Wine, and it may alſo ſerve for the ſame uſes.

uſes. The Salts and the volatile Spirits are very proper in all diſtempers where there is a neceſſity of cutting and attenuating hurtfull humours, and to expel them through the pores of the fleſh and the skin, by ſweat or inſenſible tranſpiration. They are alſo very uſeful in Epidemick diſeaſes, as alſo in thoſe of the Breaſt, eſpecially in Aſthma's and Pleuriſies; for they powerfully looſen Flegm which ſtops up the conduits of reſpiration, and help expectoration. They diſſipate alſo the vapours that ſometimes gather in thoſe parts, and are ſufficient to produce an Aſthma, without the concurrence of Flegm. They diſſolve the coagulated Blood which cauſes the Pleuriſie, provided it be given in time, and before the extravaſated Blood be turn'd to putrefaction. The doſe is from half a ſcruple to half a dram, in Wine, Broth, or any other proper Liquor. They are mingl'd alſo with Syrrups, or Opiats. The uſe thereof may be alſo continu'd, only giving leſs at a time. The volatile Oil is chiefly apply'd externally, by anointing the parts that are attack'd with Rheumatiſms, or any cold pain. It ſerves alſo to recall and diſpierce the Spirits through the members of Paralytick perſons.

CHAP. XXI.

Of the Diſtillation of Pulſe.

AMong the ſeveral Spirits which are to be drawn from Pulſe, in a cloſe reverberating Furnace, there is chiefly to be got a volatile Salt, more diſtinct, and in greater quantity, then from any other Grain appointed for the nouriſhment of man; and alſo with more eaſe then from moſt of the other parts of Vegetals, excepting from ſome Antiſcorbutick Seeds or Roots. And I believe, that men would be more diligent in the ſearch of it then they are, were they not diverted from it by the ſight of ſuch a quantity of fix'd Salt, as uſually they draw from their Husks, when they burn them to Aſhes, and when they take the ſame courſe as in extracting the fix'd Salt out of the other Plants. But if they make a ſerious reflection upon the various nature of Salts, and upon the great inclination which acids have to unite themſelves entirely to the fix'd Salts, and upon the power which they have to ſtay and fix the latter for a time, I believe they would be of the ſame opinion with me: an opinion common with ſeveral modern and judicious Chymiſts; which is, that all the Salts of Plants, which Chymiſtry has at all times acknowledg'd for fix'd, would neither prove to be Salts, nor in ſo great a quantity, nor would, as they do, reſiſt the violence of the fire, if the acid Salt of the part of the Plant, reduc'd to Aſhes, together with that of the Air, and that of the combuſtible matters, which they make uſe for Uſtion and calcination of the ſubſtances, did not ſtop the Salt naturally volatile, joining it ſelf entirely to it, and making it capable to reſiſt the flame. Though to ſpeak more truly, theſe Salts, as united as they are, would not be ſo permanent againſt the fire, had they not embrac'd and united in their conjunction, the moſt Alkoliz'd or purer part of the Earth, from which they ſeem nevertheleſs to have been well ſeparated by filtration; and if they had not taken that Earth for the foundation of their union.

We are to believe alſo, that the acid Salt is not altogether ſo neceſſary in the compoſition of all mix'd bodies, eſpecially in the compoſition of Plants, that without it they can neither attain the production, growth, or perfection of their parts; that nothing can be perfect without its aſſiſtance; that this is the bond of all other ſubſtances, without which it were impoſſible for them to have any firmneſs or conſiſtence; or that all the productions of the world would return to their ancient Chaos, if once depriv'd of this acid Salt, which they make to be the Soul and upholder of nature. But to return to our buſineſs, which is the Diſtillation of Pulſe, without undertaking to ſet down the Diſtillation of every one in particular, I will fix upon that of Beans, which is in truth the groſſeſt ſort of Pulſe, but which yeilds to none of the reſt, as well for its ſubtlety and penetration, as for its abundance of volatile Salt.

CHAP.

CHAP. XXII.

Of the Diſtillation of Beans.

TAke about five or ſix pound of Beans whole and dry, and having put them into a Cornute of Potters Earth, or Glaſs environ'd with lute, ſo that about the third part remain empty, place it upon a cloſe Furnace of Reverberation; and having fitted and luted it to a very large Recipient, and ſtop'd the Regiſter of the Duomo, or Cover of the Furnace, kindle a ſmall fire in the Cinder-place, enough to warm by degrees the Cornute and the Beans, and having kept it thus for a good hour, begin to kindle a fire in the Hearth-place, ordering it ſo that it may give no more heat then that in the Cinder-place; and having ſo continu'd it for a good hour, increaſe the fire by degrees from hour to hour, but not to exceſs. During which time you ſhall ſee deſcend into the Recipient, the watry part of the Beans, in a very great quantity; after which give a little air to the Regiſter of the Duomo, upon the Recipient ſide, and increaſe your fire from time to time, till you perceive the great Ball to be fill'd with white Clouds, which will diſſolve by little and little, and inſenſibly, into Liquor, the Oil and ſpiritous Salt part deſcending to the bottom of the Veſſel. Then keep an equal fire for two good hours, and give a little air to the Regiſter; after which you may open it altogether, giving a more violent fire, and at length a flaming fire, which you muſt continue till you perceive no more vapours in the Cornute, and that the Recipient be clear. At which time ſtop up the Regiſter of the Duomo, and the doors of the Furnace, and let the Veſſels cool; then, having unluted the Recipient, you ſhall find a great quantity of Flegm mingl'd with the Oil, the Spirit, and the volatile Salt of the Beans, which will be ſo penetrating, that you will not be able to hold your Noſe nor your Eyes over the mouths of the Veſſels. Then quickly pour out all the Liquors into a Bottle with a very long neck; and having cover'd it with its head perfectly well luted, and fitted a beak to the Recipient, place the Recipient in a Bath of Sand in an airy place, out of the Sun and far from any heat, but what is neceſſary to heat the Sand and the ſubſtances; by means whereof you will ſee the volatile Salt aſcend by little and little, and coagulate it ſelf very white and chryſtalline in the inſide of the head, which you muſt cover with a Linnen Cloth ſeveral times doubl'd and dipt in cold water, to hinder the diſſolution of the Salt, which will turn into Liquor with the leaſt heat, ſooner than any other volatile Salt; ſo that it is a hard thing to keep it otherwiſe then in Liquor. But with art and ſpeed you may take it out of the head in a white chryſtalline form, and preſerve it alſo for ſome time in a Bottle very well ſtop'd. But you muſt have ready another head to put on in the place of that which you take off, to continue, after you have well luted the jointures, the rectification of the ſubſtances, while you draw forth and put up the firſt Salt. And by that means you will receive into a little Recipient the reſt of the volatile Salt, diſſolv'd in ſome ſmall portion of Flegm, and the moſt volatile oily part of the Beans, which you may ſeparate and keep apart, while the uſeleſs Flegm and ſtinking part of the Oil remain at the bottom of the Matras.

The volatile Salt of Beans, is a moſt powerful Diaphoretick, and may paſs for the moſt ſubtle and penetrating volatile Salt that can be prepar'd. It may be giv'n for the ſame uſes, and in the ſame doſe, as the other volatile Salts of which I have ſpoken, and be giv'n with ſucceſs for the ſame diſtempers. The vertues of the Oil are very near the ſame with thoſe of the Salt. You may give it from two drops to ten or twelve, mingl'd with fine powder'd Sugar, and afterwards mix'd in ſome proper Liquor. It is good to anoint Paralytick Members, and ſuch as are attack'd with Rheumatiſms; to anoint the Navel and Stomach of thoſe that are troubl'd with the Chollick, and to kill the Worms. In diſeaſes of the Brain and Matrix, it is good to put up into the Noſtrils, and to anoint the Temples.

The Diſtillation of Beans gives me an occaſion to relate an Experiment of my own upon this ſubject, to juſtifie what I have ſaid in the foregoing Chapter, about the fixation which happens to the Salts of Plants, by the conjunction of acids, in the

the Uſtion and calcination which is made of the ſame Plants, when there might be another way to preſerve their volatile Salts, by ſeparating them from the ſubſtances by Diſtillation. I burnt on purpoſe in a Crucible, and reduc'd to Aſhes a pound of dry Beans, like to thoſe which I diſtill'd in the Cornute, yet perceiv'd not, during the Uſtion, any ſcent of volatile Salt, as it happens in burning Animals entire, or in their parts. Making uſe of a violent Charcoal fire for ſix hours, to reduce theſe Beans into Aſhes, I found at the bottom of the Crucible about ſix drams of white Aſhes, of a Salt taſte, like a Lye, picquant and cauſtick. But making uſe of the ſame fire to burn to Aſhes the ſediment of ſix pound of Beans, out of which I had drawn the volatile Salt by Diſtillation, I could hardly get an ounce of Aſhes, and not ſo white neither as the former, and of a taſte much leſs picquant and Salt. So that I was convinc'd that there was no finding the volatile Salt in the laſt Beans, which was drawn off by Diſtillation; and that their Salt could not be ſo tart as the Salt of thoſe which had not been diſtill'd, of which the acid and volatile Salt compos'd the chiefeſt ſubſtance; which makes me believe, that the ſtrong odours that riſe from Animals in their Uſtion, and which is a ſign of the diſſipation of their volatile Salt, proceeds only from the want of acids, the ſmall quantity whereof not being able to ſtop the volatile Salts, they are conſtrain'd to fly away, when they are expos'd to the violence of the fire.

Peaſe, Kidney-Beans, Vetches, Lentils, and other Pulſe, may be diſtill'd the ſame way, and the ſame ſubſtances may be drawn from them, though they have leſs volatile Salt then Beans.

CHAP. XXIII.

Of the Diſtillation of VVoods.

WOods are not only the moſt ſolid parts of Vegetals, but alſo thoſe which afford the moſt acid Salts, as is manifeſt by diſtilling them in the Cornute; which gives us occaſion to make two or three obſervations very conſiderable. The firſt of which is, that the acid, which they contain in great quantity, binds and fixes the volatile Salt in ſuch manner, that it is a difficult thing to diſtinguiſh it by the ſcent, which is mingl'd therewith, from the acid Spirit, the Oil, and the Flegm. Whereas the volatile Salts of Animals and Beans, predominating over their acid, immediately affect the Eyes and Noſe of them that unlute the Recipient, into which they are fall'n with the volatile Oil, the Spirit, and the Flegm. The ſecond obſervation is, that it is harder to ſeparate the volatile Salt of Woods in their Spirit, or acid Salt, their volatile Oil and their Flegm, then to ſeparate that of Animals, Beans, or Antiſcorbutick Seeds, from the other ſubſtances, which are drawn forth with it by Diſtillation, becauſe the volatile Salt of Woods is found to be half fix'd by the acid which exceeds in quantity. Whereas in the Diſtillation of Animals, Beans, and Antiſcorbutick Seeds, the acid is found in leſs quantity, then the volatile Salt. The third obſervation is this, that the Salt which may be drawn from that which remains in the Cornute by calcination, is not ſo plentiful, nor of that ſtrength, as that which may be drawn from the like quantity of the ſame Wood reduc'd to Aſhes, becauſe the volatile Salt of the latter is retain'd, during the Uſtion, by the acid of the ſame Wood, as alſo by that of the Air, and the ſubſtances that reduc'd it to Aſhes.

CHAP. XXIV.

Of the Diſtillation of Lignum Rhodium.

I Begin the Diſtillation of Woods with that of Lignum Rhodium, otherwiſe Roſewood; ſo called, not that it bears Roſes, but for that the ſmell of it is very like to that of Roſes.

Having raſp'd into ſmall pieces a good quantity of this Wood, and having fill'd about two thirds of a little Veſſel, pour upon it Rain-water or River-water, and having quite fill'd the Veſſel, ſtop it well, and leave the ſubſtances in that condition for about fifteen days. Then put one part of the Wood and the Liquor into a Copper Veſſel well Tinn'd within, and having cover'd it with a Moors-head Tinn'd in the ſame manner, and having luted the jointures, and fitted to it a well luted Serpentine, running athwart a Pipe of cold water, together with a Recipient, make a Diſtillation with a moderate fire, and continue it till about two thirds of the Water, which you put into the Veſſel, be drawn off. Then having cool'd the Veſſels, and ſeparated and put up into a little Glaſs Bottle well ſtop'd, that little quantity of odoriferous Oil that will ſwim upon the Water, and ſet the ſame Water aſide, renew and continue the Diſtillation of that which remains, proceeding in every thing as you did before, till you have diſtill'd all that you put up in the firſt Veſſel. By this means you ſhall have a volatile clear Oil, of a yellow colour, the ſcent whereof will be very like to that which you draw from Roſes by Diſtillation; and a Water not much different in ſcent and vertue from that of ordinary Roſe-water.

The quantity of Liquor which is neceſſary to be made uſe of in this Diſtillation, makes ſo great a diffuſion and diviſion of the acid and ſalt parts, which aſcend in Diſtillation, that you cannot diſcern them among the Water, either in taſte or ſmell, though they be certainly there, but in a leſs quantity then if you had diſtill'd the Wood alone in a Cornute; which you muſt not do however, unleſs you value not the beauty and good ſcent of the Oil and Water, which you may draw from the Wood by this way which I have ſet down.

This diſtill'd Oil of Lignum Rhodium is eſteem'd as well for its pleaſing ſcent, as for its medicinal vertues. Some there are that preſcribe it in diſeaſes of the Mouth and Throat, as alſo for thoſe of the Reins and Bladder, mixing it for thoſe uſes with fine powder'd Sugar, and ſteeping it in its own proper Water; making uſe of it as well in Gargariſms for diſeaſes of the Mouth, as in drink, from two or three to ten or twelve drops, in five or ſix ounces of its own proper Water. But the chiefeſt and moſt advantageous uſe of it is in Balſoms, call'd Apoplectick; where this Oil agrees marvellouſly well with Musk, Ambergreeſe, and the good ſcent of all ſort of Aromaticks, Oils, and Eſſences that are wont to be mingl'd with it. It is alſo the beſt Succedany that can be made uſe of in the place of the true Oil of diſtill'd Roſes. You may in the ſame manner diſtill Saſſafras, Lignum Aloes, Santal-woods, and the like.

CHAP. XXV.

Of the Diſtillation of Guaiacum.

YOu may proceed in the Diſtillation of Guaiacum after the ſame manner as in the Diſtillation of Lignum Rhodium, eſpecially if you deſire a proper Oil to give inwardly. But becauſe this Oil is generally outwardly apply'd, and for that there is great reck'ning made of the acid Spirit which may be drawn forth by the Cornute, it is but convenient that I ſhould ſhew the preparation of it.

Having

Having put into a luted Cornute about ſix pound of Guaicum raſp'd, or if you pleaſe, groſly cut, yet ſmall enough to put in through the beak of the Cornute, put it into a cloſe Furnace of Reverberation, and having fitted and luted to it a large Recipient, kindle a ſmall fire in the Cinder-place, enough only to heat by degrees the Furnace and the Cornute. And having continu'd it very moderately for a good hour, tranſlate the fire into the Hearth-place of the Furnace; where after you have kept it as long, increaſe it by degrees, till you perceive the watry part of the Wood deſcend into the Recipient; then open a very little the Regiſter of the Duomo toward the ſide of the Recipient, and continue and increaſe the fire a little, till you ſee white vapours come out of the Cornute like Clouds, which are a ſign that the acid Salt and oily parts of the Guaiacum begin to come forth; at which time open alſo the Cover to the Duomo, and increaſe the fire more and more, till the great Recipient to look clear, by which you may gueſs the Diſtillation to be compleated. Then ſtopping up the Regiſter of the Duomo, and the doors of the Furnace, and letting it cool at leiſure, together with the Cornute, unlute the Recipient, and you ſhall find an acid Spirit, charg'd with the volatile Salt part of the Guaiacum, mix'd with a dark ill ſcented Oil, and much Flegm. Then pour the whole into a large Tunnel, lin'd with wet waſte Paper, through which the Flegm and Spirit charg'd with the volatile Salt will paſs, and drop into the Bottle out of the Tunnel; and the thick Oil will ſtay in the Paper, which you muſt afterwards ſet to drop into another Bottle, piercing the ſmall end of the Paper with a Bodkin, and keeping the Oil apart for your uſe.

For curioſity-ſake you may burn to aſhes the coal of the Guaiacum, remaining in the Cornute after Diſtillation, and having extracted the Salt by the uſual ways, ſeparate that which is meerly terreſtrial, and may be well call'd the *Caput Mortuum*. But this would waſte more Coal then the profit would turn to; only the Salt may be uſeful in Purgatives, eſpecially in Venereal diſtempers.

You may alſo diſtill Guaiacum, and ſuch like Woods by deſcent, and draw forth almoſt the ſame ſubſtances as by ſloping Diſtillation, but not ſo pure; by putting the Wood cut into a Cucurbit, covering it with an Iron Cover, with ſeveral little holes made in it, made like the Cover of a Box, ſo that it may juſt fit the orifice of the Cucurbit; which you muſt afterwards turn upſide down upon its Cover, and place it upon a Furnace built on purpoſe, ſuch an one as I have deſcrib'd in the firſt part of this *Pharmacopœa*, in the Chapter of the Furnaces. For after you have ſet a Recipient under the Cornute, fit for the neck of it, and carefully luted the jointures of the Veſſels, and heated by degrees the body of the Cucurbit, you ſhall find at length in the Recipient, the Flegm, Oil, and Spirit, charg'd with the volatile Salt of the Guaiacum, in as great a quantity as by the Cornute; which you may ſeparate in the ſame manner as thoſe that went before.

You may make choice of which of theſe three methods you pleaſe for the Diſtillation of the Wood of the Haſell or Wood-nut, call'd *Corylus* by the *Latins*, by others *Lignum Heracleum*; and alſo of the Woods of Box, Oak, Aſh, Cyprus, Cedar, and other Woods. The Oil of Guaiacum diſtill'd is very much applauded in Diſeaſes of the Bladder, with an addition of Water, following the method preſcrib'd in Oil of Lignum Rhodium. To purifie the maſs of the Blood; ſo that ſome do affirm that by continuing the uſe of it for ſeveral weeks, from four to ten or twelve drops, in its own Water, from three or four to ſeven or eight ounces, it is able to expel and carry away through the pores of the skin, the Veneral venom, eſpecially if it be not too much inveterate, without making uſe of Mercury, the uſe whereof is not always ſo proper. It is good for the cure of Veneral Ulcers that happen in the mouth. Some are of opinion, that the Tablets which may be made of it, are very proper to hinder people from growing over fat, and to make them lean that are too fat, continuing the uſe of them.

The Oils of Guaiacum diſtill'd through the Cornute, are never made uſe of inwardly, by reaſon of their ill ſcent; but outwardly they are ſucceſsfully apply'd for the cure of all ſorts of Ulcers, eſpecially Venereal; to cleanſe wounds, and to conſume proud fleſh; as alſo for the opening or exfoliation of the Bones, and againſt their putrefaction.

The Spirit of Guaiacum is Diaphoretick, by reaſon of the volatile Salt with which it is charg'd in Diſtillation. It is giv'n in Venereal diſtempers, and in Rheumatiſms, from a dram to half an ounce; in a Glaſs full of the decoction of

the ſame Wood, or of ſome Cordial-water, when there is a neceſſity to expel by ſweat or inſenſible tranſpiration, the ſharp ſeroſities which are the cauſe of thoſe diſtempers. It is alſo proper for the cure of petty Ulcers in the Mouth or Gums, as well in Venereal as Scorbutick diſeaſes. The ſame Spirit expels by Urine thoſe ſeroſities, which are not to be expel'd by the pores.

You may if you pleaſe, rectifie the Spirit and Oil of Guaiacum, over a Sand-Bath moderately hot, in a Glaſs Cucurbit cover'd with its head, and having ſeparated the almoſt inſipid watry part, which will firſt aſcend, receive and keep apart the ſpiritous acid and ſomewhat ſalt part, which will ſucceed, and which will be attended with an oily volatile, which contains alſo its part of the volatile Salt, and which may be alſo ſeparated and kept apart as well as the acid, and may be adminiſtred inwardly, incorporating it with fine powder'd Sugar, and mixing it in ſome proper Liquor.

It will be needleſs here to ſhew you the Diſtillation of the Rhind of Guaiacum, in regard you may proceed after the ſame manner, and make uſe of as many ways, as for that of the Wood. And though the Bark may work as efficaciouſly and in leſs quantity then the Wood, yet the vertues thereof are altogether the ſame.

CHAP. XXVI.

Of the Diſtillation of ~~Elder-wood~~ Soot

THey that only mind the dark colour, the bitter taſte, and noiſome ſmell of ~~Elder~~ Soot, may not only deſpiſe it, but have an averſion to it. But they that will take the pains to make a ſtrict examination of all its parts, and to make an exact ſeparation and purification thereof, will find therein qualities conſiderable enough to merit the pains of Artiſts. For they will not only find the five different ſubſtances which are uſually obſerv'd in Vegetals, eſpecially in Woods, but alſo the real marks of the exiſtency of their volatile Salt, and the fixation of one part of the ſame volatile Salt with the Oil, by vertue of their own natural diſpoſition. As you ſhall ſee in the following Diſtillation of ~~Elder-wood~~ Soot.

Having made choice of ~~Elder-wood~~ Soot, the greeneſt, the blackeſt, the moſt ſolid, the moſt glittering, and the biggeſt pieces you can get, and fill'd about two thirds of a great Cornute of Fullers-Earth, and luted it round; place it in a Furnace of Reverberation, and having cover'd it with its Duomo, and ſtopp'd up the Regiſter, kindle a fire of the firſt degree in the Hearth-place, ſhutting up the doors of the Cinder-place and Hearth-place, keeping a fire for two or three hours together, or till the liquor which diſtills from the Cornute begin to grow acid; at which time put a large Recipient to the beak of the Cornute, and having carefully luted the jointures, increaſe the fire by little and little from degree to degree, giving air proportionably to the Regiſter of the Duomo, and to the door of the Cinder-place; and you ſhall perceive the acid Spirits come forth of the Cornute in white Clouds, which will appear by degrees more thick, when the Volatile Salt comes to be mingl'd with them, and more ſtill when the Oyl comes firſt in great quantity. During which time, open the Regiſter at times more and more, encreaſing the fire from degree to degree, to the utmoſt extremity of heat, opening altogether the Regiſter of the Duomo, and the door of the Cinder-place, and continuing the ſame fire till no more come forth of the Cornute, but that the Recipient become clear. After which having ſtopp'd up the Regiſter and the doors of the Furnace, and letting the Veſſels cool of themſelves, unlute the Recipient, and you ſhall find there the acid Spirit, the volatile Salt, the Oyl, and a part of the Flegm mingl'd together, and which have need of being rectifi'd. To which purpoſe, having put the whole into a Matras with a long neck, plac'd in a Sand-bath and cover'd with its head, perfectly well luted, and having fitted to it and well luted a Recipient, kindle a very moderate fire under the Sand-bath, by means whereof the volatile Salt will aſcend firſt into the head, white and Chriſtalline; which you muſt draw forth and put up cloſe and carefully in a double glaſs bottle well ſtopp'd; fixing and luting on another head in the place of

of the former. And then continuing the ſame fire, the ſpirit will aſcend with the reſt of the volatile Salt, already diſſolv'd, and will be attended with ſome part of the moſt pure and moſt volatile Oyl, while the thick and unprofitable Flegm remains at the bottom of the *Matras*.

The volatile Oyl of Elder is a powerful Diaphoretick, partaking much of the qualities of thoſe Oyls which are drawn from Animals. The Spirit partakes much of the vertues of the volatile Salt, a great portion whereof it contains. The volatile Salt is giv'n from five or ſix, to fifteen or twenty Grains, and the Spirit from half a ſcruple to one dram; both the one and the other in proper liquors. The Oyl is alſo giv'n from two drops to ſeven or eight, incorporated with fine powdred Sugar, and diſſolv'd in Wine, to the ſame purpoſes, as the volatile Salt. It is highly priz'd in Oyntment, to cure Ring-worms and other diſeaſes of the Skin.

In the mean time burn that which remains in the Cornute, and draw forth by the ordinary ways a fixed Salt, which is very good to cure open Cancers, applying it as follows. Having ſteep'd this Salt in Vinegar, leave it to diſſolve into liquor in the Cellar; then anoint the Cancer once or twice, to fetch out the venome like a ſmoak; afterwards continue to perfect the cure with the diſtill'd Oyl, which will bring a ſcab or cruſt upon the Cancer, that will fall off of it ſelf in five or ſix days, by which you may give a ſhrewd gueſs at the Cure.

CHAP. XXVII.

Of the Diſtillation of Fruits. *And firſt of* Gourds, Coucumbers, *and* Melons.

THough Fruits in their Compoſition, have the ſame Principles which we obſerve in all other parts of plants; the difference however which is in their qualities, and the knitting together and proportion of their ſubſtances, being as various as the ſubſtance of the plants which produce them, we cannot preſcribe any Rules ſo certain, as to be properly adapted for the diſtillation of theſe Fruits. Trees, Shrubs, Buſhes, and alſo certain plants produce fruits. But though the trees exceed in greatneſs all other Vegitals, and produce their Fruits in greater abundance, better digeſted, and in greater perfection. Yet there are no fruits in *Europe* ſo big as thoſe produced by certain plants that dye every year, and among the reſt the Round and long Gourds, whoſe exrraordinary bigneſs, ſoftneſs, and ſwift decay, and the weakneſs and moiſture of the plants that bear them, demonſtrates to us, that the principal and moſt abundant part of their compoſition conſiſts in an ill concocted Flegm, and that they contain very little Spirit or volatile Salt, and little appearance of Oyl, but only in their ſeed when it is very ripe. So that as there is nothing to be expected from a mix'd body beyond what it contains, there is nothing to be hop'd for from theſe Fruits in Diſtillation, but only a clear water containing very little Spirit and volatile Salt, only enough for its preſervation. And therefore it is ſufficient to bruiſe them well; and having put them into a Cucurbit of Glaſs, or Earth glaz'd within, and cover'd with its head, make a diſtillation thereof in *Balneo Mariæ*, or in a Bath of Aſhes with a very moderate fire, as I have ſhew'd before in the diſtillation of cooling herbs.

You may do the ſame thing with Coucumbers and Melons; But becauſe the ſcent of the latter ſhews that they contain more volatile parts than Gourds or Coucumbers; you may ferment them a little, and thereby looſning the bonds of the volatile ſpiritous and inflamable part, will cauſe it to aſcend firſt in diſtillation; which hinders not but that you will have after all, a very fair water, whoſe refreſhing vertue will pertake much of that of Gourds and Coucumbers. To which effect, bruiſe a good part of that which is fit to eat, and having fitted two thirds of a glaſs Cucurbit, cover it with a veſſel of Rencounter well luted, and having left it to digeſt in a Sand-bath, or upon a Bakers oven for two or three days, lute on a glaſs head upon the Cucurbit, inſtead of the veſſel of Rencounter, and having fitted and luted

to

to it a ſmall Recepient, make a diſtillation in *Balneo Mariæ*, or in a bath of Aſhes over a very moderate fire, ſeparating the volatile odoriferous and ardent ſpirit, which will firſt aſcend, and keeping the water apart which will ſucceed, by continuing the Diſtillation, till there remain in the Cucurbit but a third part of what you put in to diſtill.

The diſtill'd waters of Gourds and Coucumbers, the inflamable ſpirit and water of Melons, are us'd as well to ſmooth, beautifie and preſerve the complexions of Ladies, as for other uſes. In continual and intermitting Colerick Agues and Fevers, theſe waters are us'd to cool the heats, and provoke ſleep, giving them inwardly; or applying them to the Forehead and Temples.

CHAP. XXVIII.

Of the Diſtillation of Citrons.

THe advantages which may be made of the different parts of Citrons, is the reaſon that ſometimes we diſtill them all together; and ſometimes only thoſe that are proper for our purpoſe. The good ſcent, and the ſharp and pleaſing taſt, as well of the outward rind, as of the acid part of the Citron, ſufficiently ſhew the difference of the pure parts which they contain, and withall that their ſeparation is not ſo difficult, but that you may bring it to paſs by ways common enough.

You may put the Citrons cut or bruis'd into a Glaſs Cucurbit, filling the one half, and having fitted and luted to it a Recipient, let them macerate for four and twenty hours; and diſtill them afterwards in *Balneo Mariæ*, or in a Sand or an Aſh Bath, with a very moderate fire.

Sometimes Citrons are diſtill'd whole, being firſt well bruis'd, mixing them with Pigeons, Crum of white bread, with the cold ſeeds and Poppy ſeeds bruis'd, with Borax, Allum, Milk, or other proper liquors, to obtain a ſpiritous water, the uſe whereof is to cleanſe, ſoften and prevent the wrinkling of the Skin, as alſo to beautifie and make clean the complexion. The juyce of Citrons is never diſtill'd alone; it being ſufficient for the moſt part only to purifie it well, when you would make uſe of it to diſſolve Pearls, Coral, or ſuch like pretious-ſtones: or make it into Syrup, Tablets, or any other Galenical compoſition. You may nevertheleſs ſeparate the moſt watry part in *Balneo Mariæ*, or an evaporating Bath in a Cucurbit of glaſs cover'd with its head, and find in the bottom of the Cucurbit a juice more acid then ordinary.

As for the rind of Citron, you may uſe it as it is, being well cut, or elſe take only the outward yellow rind, par'd off with a knife. Take either the one or the other, and put it into a glaſs Cucurbit and pour upon the ſubſtance Rain water diſtill'd till it come to be above the rind about three or four fingers; then cover the Cucurbit with a veſſel of Rencounter or a meeting veſſel, having carefully luted the joyntures. Then macerate the whole during eight or ten days, upon a Bakers Furnace, and proceed to diſtillation in a bath of Aſhes, or a Sand bath over a moderate fire. By which means you ſhall draw forth a water accompani'd with a ſmall quantity of yellow Oil, that will ſwim at the top, and will be both of them very odoriferous; eſpecially the oil, the taſt whereof will be very ſharp and penetrating.

The Oil of Citrons may be given from two drops to ſeven or eight, mixing it with ſome drams of fine powdred Sugar, to diſſolve it in five or ſix ounces of its own water. This mixture muſt be tak'n a good while after meals, in peſtilential or Epidemick diſtempers; and upon all occaſions where there is a neceſſity of provoking ſweat, and to expel Malignant Seroſities by inſenſible tranſpiration. It is alſo to be commended againſt all cold diſeaſes of the Stomach. There is a Balſome alſo to be made of it, mixing it with Oil preſs'd out of Nutmegs, very proper againſt in-
[illegible]ious Air, as for its pleaſing ſcent. Some commend this Oil to be uſed as well
[illegible]ntments, as to be taken inwardly, againſt the biting of Vipers and all ſorts of
[illegible]s. To which purpoſe I believe it to be very uſeful, in regard of its great
vertue

[illegible]
fec.
in Oy
Serpent.

vertue to fortifie and comfort the Noble parts; for being taken inwardly, and assisted with its water, it expels by sweat the malignant spirits, which may have insinuated themselves into the mass of the blood, through the holes which the Serpents teeth have made.

The distillation of Orenges and their parts is the same with that of Citrons.

But I cannot but admire at the proceeding of a certain *German* Doctor, named *Frederick Hoffman*, who in a book which he set forth at *Hale* in *Saxony*, in the year 1675. under the Title of *Clavis Pharmaceutica Schroderiana*, has made a real *Dutch* quarrel with all the *French* Nation, and with me in particular, without any ground, reason or foundation, and upon false surmises. This Doctor, and Author of a book (of which, it may be truly averr'd, that whatever is good in it, is taken out of the writings of the deceas'd *Doctor Michael*) speaking of Citron, and wanting matter, after he has repeated a Story, recited by *Atheneus*, of a man that having eaten a Citron which a woman gave him, was cur'd of the bad effects of the biting of an Asp, proceeds in his 444, 445, 446, pages in these words.

The truth of this Story is confirm'd by a Studient of Physick in Paris, *almost mortally wounded by the biting of a Viper, and cur'd by the wholesom diet of Pome-Citrons. This Student being present in the company of several Physitians, desputing about the nature, vertues, and venome of Vipers, in an Apothecaries House, who at that time had good number of them brought him home from the adjacent parts, and mingling discourses* pro *and* con *with the rest, snatches up in his hand, as he had often times done before without any prejudice, a Viper lay'd upon the table, and having been rudely pinch'd and angred by the* French *Apothecary a little before, though unknown to him, thereupon the Viper handled and in wrath, turns his head, while the Student was earnest in his discourse, and gave him a wound in his right thumb, no bigger than for a small needle to enter. Whereupon the Student flung away the Viper, but never minded the wound. But within less then a quarter of an hour, dismal symptomes follow'd, as Swoonings, Convulsions, continual vomitings, loosness, gripes, and Iliack passions, with a numness of the Extream parts, his arm of a saffron colour swell'd and grew black and blew, and his eyes sunk in his head. Yet his thumb was least swell'd, only under the end, neither did one drop of blood trickle from the wound. This unexpected and sudden tragical mischance, variously divided the advice of the present Physitians. One was for Treacle, another for Orvietan, a third for a strong Cautenzation. The poor young Gentleman, wrack'd with pains, yet full of courage, call'd for volatile Salt of Vipers with a little Treacle; but to no effect, for he presently threw it up again: neither did Clisters do him any good, the whole frame and Oeconomy of nature being quite out of order. It happen'd by accident that a noble Forraigner, pitying the condition of the Student, gave him a Pome-Citron: which not so much by the smell but by swallowing the acid juice thereof, it is an incredible thing to relate, what present ease it gave. Presently all the symptomes ceas'd, as if heaven it self had sent a remedy from above. Though the French-men out of the accustom'd vanity of their humour took little notice of it. As for the Patient, though weak'nd with his former pains, he went home to his study, and taking an Electuary, made of Confectio Hamech, and Hyacinth, and now and then eating his Pome-Citron, not only slept well that night, but soon after perfectly recover'd.*

From this observation, many Phoenomena's of Nature, not yet so exactly known, come to be made more plain. For from hence the nature of the poison is easie to be made apparent, how it is infus'd by Vipers into man; whether it act upon the mass of blood or upon our Archeum. What are the actions of the Archeum in producing and curing diseases; how medicaments by the benefit thereof perform their operations; and in particular how the acid juice of Citrons fixes and mortifies the venome of a Viper.

The French Apothecary, in whose house this Tragedy began, has set out a Treatise, or else somebody else for him under the name of Charas, *entitled the Experiences of the Vipers of* Paris, *wherein he affirms that that venome acts upon the mass of the blood, fixing it and hindring Circulation, and presently after, poison like an acid, fixes the blood.*

But if that were the reason, how could the juice of Limons afford such present ease? which he affirms to have a fixing power; for then the venome would be more fix'd, and by the absolute hindring of circulation, death would ensue. And therefore we affirm that the venome lies in the slimy humours contain'd in the Verticles of the teeth, beyond the known quantity, as the experience of the more curious modern Italians *have made evident; such as* D. Redi *the chief Physitian of* Florence; *which humour being drank in any Liquor does no harm; but if the fury and anger of the beast be once infus'd into it, then upon a wound*

wound made by the long ſharp teeth in the ſuperficies of the body, preſently the maſs of blood ſtriving to expell that unwelcome ſtranger, makes ſuch a ſtrong reſiſtance as diſturbes all the functions of the body, labouring under the Tyranny of the venome, till by aſſimulating to it ſelf it have ruin'd all the ſubſtance of the ſpirits and vital liquors; until ſome remedy, by an innate quality, like this of the juice of Citron, in ſuch a concourſe of diſeaſes and ſymptomes, be found ready, having an extraordinary and ſupereminent quality to appeaſe the rage of the incens'd and anger'd maſs of blood.

I had tranſcrib'd the whole ſtory, which I have publiſh'd in my book of *New Experiences upon Vipers* upon occaſion of this Vipers biting the finger of a *German* Gentleman, and not a Student in Phyſick, as our new Author would have him to be; but that I thought it would ſwell my book too much, to inſert twelve pages, which this ſtory takes up: or if I did not think it more proper to confine my ſelf to the moſt neceſſary remarks, which I have made upon this ſubject; being well aſſur'd, that the Quotations of my Antagoniſt, are falſe, both in reference to my book, and the truth of the Story.

He is not aſham'd in the firſt place to attribute to the Citron alone, the cure of the Vipers biting; though we muſt abſolutely believe the contrary, as well in regard of the truth of what happn'd upon this biting, as for the reaſons which I ſhall enforce. Afterwasds he ſpeaks of me, ſaying that the Student in Phyſick, *was at the houſe of a certain Apothecary*, where ſeveral Phiſitians were met to diſcourſe upon the nature and power of the venome of Vipers. I find I live too far off to be ſo well known to the Doctor as I have the honour to be to ſeveral perſons, altogether as eminent for their quality, and their great reputation among learned men; and thoſe not only at home but abroad.

He would in ſome meaſure make me guilty of the biting of the Viper, when he ſays that the Gentleman took up in his hand from the table a Viper, which I had incens'd and provok'd contrary to his knowledg. As if I had had a deſign maliciouſly to cauſe the Viper to bite the Gentleman: whereas you ſhall find in my relation, how much he was perſwaded to let the Viper alone, and the danger lay'd before him to which he expos'd himſelf. However he would needs do it, to ſhew that he fear'd the Vipers of *France*, as little as the Serpents of *Germany*.

This author, continuing his diſcourſe, and relating what happen'd after the biting, conceals one very remarkable circumſtance, that there was no yellow matter upon the wound where the tooth had gone in: as there would have been doubtleſs, had the Viper had his full bite. It was cunningly done of him, not to ſpeak of the abſence of this yellow juice, ſince he would have that to be the ſeat of the Vipers poiſon; and then they that deſire to be of his ſide, would be forc'd to ſtagger in their opinions, when they ſhould come to know that all thoſe ſymptomes happen'd without any participation of the yellow juice.

Nor is he content to conceal the abſence of the yellow juice, which would deſtroy that ſeat of the poiſon which he endeavours to ſet up. For he ſtrains by ſeveral Artifices to perſwade people into a belief of the impotency and unprofitableneſs of the volatile Salt of Vipers, though indeed and in truth it was the only thing that ſav'd the Gentleman, not only in the firſt ſymptomes that he had, but alſo in the latter. For in ſpeaking of the latter, out of a deſign to attribute to the whole Citron, the entire cure, he multiplies the number, by adding the ſwelling and yellow colour, which contrary to truth, he ſays, happen'd to his arm; and yet the more to contradict himſelf he ſays, that the finger was not ſwell'd, but only toward the end.

Then ſpeaking of the perplexity wherein the Phyſitians were, he aſſerts that among other remedies thought upon, there was a ſtrong Cauteriſm preſcrib'd. Whereas in the Relation which I have made, I only mention an Iron Spatula, heated red hot and held ſeveral times to the wound, to keep the pores open; and to facilitate, by that means, the tranſpiration of the venome: but ſo far was it from cauterizing, that it never touch'd the part. Which makes me wonder that a perſon that calls himſelf Doctor, ſhould conceive ſuch a thought and make ſo bad an interpretation of things.

He goes on and ſays, that the Patient call'd for volatile Salt of Vipers in Treacle water, and that thoſe and all other remedies ſignifi'd nothing. True it is, that we gave him a dram of powder of Vipers in Treacle water, and Carduus water, but having thrown up that, and all other remedies which we gave him, I propos'd to the company to give him volatile Salt of Vipers in Carduus water, believing that by

by reaſon of the little ſtay which that Salt makes in the ſtomach, the heat of it would ſend a good part thereof to the moſt remote parts of the body, eſpecially there where the venome entred, that in paſſing through all the parts, it might work ſome good effect. I ſay moreover, that though this Gentleman preſently after threw up a good part of the Salt again, yet we did not forbear to give it him every quarter of an hour; and we found, that after a manifeſt relaxation of the ſymptoms, the moſt conſiderable ceas'd after the eighth repetition of the medicine, which ſtay'd with him altogether; nor did I ſuffer the Gentleman to be carry'd home till then.

Notwithſtanding all which, the Doctor, having very much deſpis'd the volatile Salt of Vipers, and all the other remedies which were made uſe of, brings a Gentleman from behind the Hangings; and ſays, that in pity he gave a Citron to the Patient, and that he had no ſooner taſted of its acid juice, but that he receiv'd an incredible benefit, as if (ſays he) that *Jupiter himſelf had reach'd down his helping hand.* Theſe big words might ſurprize thoſe that had not read my Book, or who, not knowing the vertue of the volatile Salt of Vipers, nor how far the ſtrength of this Citron might extend; might perhaps be more ignorant of the nature of the Venom of Vipers. But when they ſhall underſtand, as it is very true, and as many credible perſons can witneſs, that the volatile Salt of Vipers caus'd all the firſt Symptoms to ceaſe, and that neither the Thumb nor the Arm, nor any of the other parts were ſwell'd, while the Gentleman was at my houſe; that he us'd this volatile Salt, and that the Citron was not giv'n him till he got home, and as a Medicinal nouriſhment among other remedies; that all this prevented not pains in his Navil; that his Eyes were not ſunk, his Face pale, or his Lips ſwell'd; and that the ſwelling of his Thumb began after he had eat of the Citron; that the uſe of it did not prevent the ſpreading of the venom into his hand, from his Hand to his Arm, from his Arm to his Shoulder, and from his Shoulder to the Region of the Liver, and that it began alſo to gain upon the Region of the Heart, encreaſing and getting ground till the morning of the fourth day, inſomuch that there was great fear of a Gangren; laſtly, when we ſhall conſider, that it was only the volatile Salt of Vipers, giv'n about half a dram at a time for three or four days one after another, that manifeſtly defeated all the laſt ſymptoms; we have great reaſon to declaim againſt all that the Doctor has ſo falſely and unadviſedly averr'd, and to find fault with his want of belief, or contempt of ſo clear a truth.

Which they will have more reaſon to do, that underſtand the ſtory of a Viper that bit a young man in the Chymical Laboratory of the Royal Garden of Plants in the year 1671, while I was making my publick Experiments, to juſtifie, againſt all the aſſeverations of *Signor Redi*, that the only incens'd ſpirits of the Viper, did cauſe the venom to work at the time of the biting, and that the yellow juice of the Gums is but only a bare froth, not only very innocent, but altogether uncapable of producing any bad effect; and of which I have giv'n the reaſons in the Continuation of my New Experiences upon the Viper, added to my Experiences printed two years before, which are not to be gainſaid. For there you will find that I was ſo far from having recourſe to the juice of Citron to fix the venom, according to the ridiculous opinion of this Doctor, that I made uſe only of the Head, the Neck, the Heart, and the Liver of the Viper, lightly boil'd upon the Coals, cauſing the young man that had been bitten, immediately to eat them, giving him after that a doſe of the volatile Salt of the Viper; and that after I had giv'n him in the evening the like quantity of the ſame volatile Salt, he ſlept quietly all the night, not having any either of the firſt or laſt ſymptoms that happen'd to the *German* Gentleman; ſo that he return'd the next morning to the Laboratory, where he had been bitten; where all the company ſaw him well, and working as if no ſuch miſchance had befaln him. From whence it may be gather'd, that the venom of the Viper, being altogether ſpiritous, cannot be fix'd, and that only the volatile Salts, or thoſe ſubſtances which contain a good quantity of it, are able to meet and encounter the incens'd ſpirits, and joining with them by a kind of ſimilitude of ſubſtance, to draw them forth, and iſſue out with them through the pores of the body, by reaſon of the ſweating which they cauſe, or the inſenſible tranſpiration which they procure.

Nevertheleſs the impoſture of the Doctor had been more ſpecious, and more nearly approaching to reaſon, if inſtead of attributing the cure of the biting of

the Viper to the acid juice of the Citron, he had fix'd it either upon the Oil, the Spirit, or the volatile Salt of the Rind of the ſame fruit. For though their vertue be much inferior to the volatile Salt of the Viper, nevertheleſs they tend very near to the ſame end. And I doubt not, but that in fortifying, as they do, the Heart and Brain, they may in ſome meaſure reſiſt the malignity of the Viperous venom; though they may not be ſtrong enough to overcome it.

But after all the care which the *French* took for the cure of a *German* Gentleman, and the beneficial ſucceſs of their management, who cannot but wonder, that a Doctor, whoſe conſcience muſt continually accuſe him of having averr'd things contrary to the truth, ſhould be ſo inconſiderate as to ſay, *That the French, out of their accuſtomed levity, took no notice of it?* When all the Nations of the World applaud the vigilance, the judgment, and the ſharp wits of the *French*; their aptneſs to apprehend things, and to perfect themſelves in all the Sciences, their ſincerity and fidelity, and their natural inclination to eſteem, oblige, and ſerve all manner of Strangers.

Nor was it enough for this Doctor to quarrel with the whole *French* Nation in general, but he muſt aſſail me in particular; and endeavour to take from me, and attribute to another, a Work wherein no perſon was concern'd but my ſelf; believing that by naming me, and abuſing my Book of *New Experiments*, and inſinuating [*or elſe ſomebody elſe for him*] he ſhould be able to deprive me of the right of my own Compoſition, which I owe to my own labour and reflexions; as if the worthy and vertuous perſons that met at my houſe were the Authors of my Book. More then that, not content to have invaded my priviledge, he endeavours to make my Book ſpeak that which is not there, and what I never had in my thoughts, while he would have the venom of the Viper, which I ſay is ſpiritous, to be acid; though I have declar'd againſt thoſe that are of this opinion, as may be ſeen in my Book of New Experiences upon the Viper, p. 97. where I ſay thus, *As to what remains, there are ſome who have thought that theſe provoked Spirits, have within them a ſecret acidity, apt to coagulate the blood, and to hinder circulation, whence proceed mortal events. But this acid having perhaps produc'd in the maſs of the blood, by means of the parts themſelves that come to diſſolve and disunite themſelves, when they are infected with venome, and that the corruption ſteals into them, as into milk, which grows ſowre, and corrupts of it ſelf, without the mixture of any acid; there is no neceſſity to look for any coagulating acid in the Spirits of the Viper, which no man dares taſt to try the truth; and ſo much the leſs, for that this acid may naturally befall the blood of the bitten Animal, without ſeeking for it in the Viper, from whence it may be flown.* For I never writ more, as he pretends, to prove that the principal effect of Venom was to fix. But I ſaid in the 96th page, *That the provok'd Spirits of the Viper meeting with the Blood, and Spirits contain'd in the Blood of the Animal bitten, ſtrive and endeavour to make themſelves a paſſage, and diſturbing the particles which compoſe the Blood, cauſe a kind of coagulation or confuſion, which troubles its ordinary circulation, and by that means hinders the communication of the Spirits to the principal parts, upon which depends their ſubſtance and their life. And by this privation they are conſtrain'd to yeild, as having been either aſſail'd in their fortreſs by theſe provok'd Spirits, and conſequently infected; or rather, becauſe theſe Vip'rous Spirits are become maſters of the Avenues, and have ſtopp'd up the paſſages by which the Blood and Spirits held a communication together.* I ſay moreover, that the coagulation which happens ſometimes, and not always, in ſome part of the blood of the bitten Animal, proceeds rather from the diſturbance which the Spirits give to the Blood, and from the ſtop which they make of its ordinary circulation, and by the ſame means from the ſubtler parts of the Blood, abandoning the thicker, with an endeavour to purſue their ordinary courſe, which the provok'd Spirits have interrupted, then from any acid; ſince the blood of the bitten Animal looſes its colour and conſiſtence in all the ſubſtance, ſo that it is but rarely coagulated, and only in ſome petty part, which is with more reaſon to be imputed to the corruption which happens to it, when it has loſt its ordinary motion, then to any coagulating acid, proceeding either from the provok'd Spirits or the body of the bitten Animal.

But to the end you may underſtand how erroneous the opinion of this Doctor is, who without defining the nature or quality of Vip'rous Venome, and without demonſtrating how, or upon what parts of the body it produces its effects; after he has only ſaid, that this ſtory puts us upon the conſideration of ſeveral Phœnomena's of Nature, yet never enlarging at all upon them, he would fain have the acid

acid juice of Citron to be able to fix this Venome; for as it is all ſpiritous, inviſible and impalpable, it is impoſſible to ſtop it, but by ſubſtances very ſpiritous, and much more comfortable to its nature, than the acid juice of Citron poſſibly can be, the operations whereof are very ſlow, and the parts ponderous, and no way able to tranſport it ſelf with a requiſite ſpeed to the parts remote from the ſtomach, eſpecially to the extremities of the body, where the venome enter'd. I ſay, that then it would follow that the Vipers venome muſt not only be of a Salt ſubſtance fix'd or volatile, but alſo perceptible and to be felt, like the Salts which we daily prepare, to be ſtopp'd and fix'd by the acid juice of Citron; which would alſo fail of its effect, unleſs it could meet with the other in the ſame place. For though acids are entirely diſpos'd to a ſtrict conjunction with Salts both fix'd and volatile, they can never do it, while there is but the leaſt diſtance between them and the Salts.

And becauſe the entrance of the provok'd Spirits is uſually very remote from the Center, that the Archeum cannot ſend the juice of Citron to the remote parts in the ſame condition wherein it was when it deſcended into the ſtomach; ſince it muſt be concocted, then chang'd into Chylus, from the Chylus into blood, before it can be diſtributed to the parts; and that the provok'd Spirits, during all this while have time and to ſpare to take their full progreſs, and to make all their deſtruction, before they come to the ſtomach, then which the juice of Citron, taken in at the mouth, can go no farther; and that the quantity of Spirits which may happen to come thither is not very conſiderable, though they ſhould conſiſt of a Salt fix'd or volatile, fit to mingle with the acid juice of Citron; I have great reaſon to believe that this Doctors opinion, cannot but be thought very abſurd by the moſt judicious perſons, and that all the world will have cauſe to wonder, that a perſon who would be accounted a great Doctor, and who boaſts himſelf to have a key to the works of one of the moſt expert men in *Germany*, ſhould fail in his diſcerning faculty, and that without any ſolid reflection upon the nature of Spirits or of Acid, which he would make uſe of ſo little to the purpoſe, he ſhould ſet up things ſo ridiculous, ſo unmaintainable, and ſo far from likelihood and truth.

With as much reaſon it may be wondred, that in imitation of *Signior Redi*, he ſhould averr, that the poiſon of a Viper lies in the yellow juice of the gums, and that confounding one part of my reflections, with thoſe of that Author, which are oppoſite to me upon this occaſion, he ſhould ſtart up an imagination of Anger, or a furious Idea which happening to the Viper when ſhe bites any perſon with her teeth, which he relates to have three points, though erroneouſly, that ſame imagination of choler is preſently enclos'd in that yellow juice, and that the bad effects of it remain as well during the life as after the death of the Viper. He would alſo have it, that the Archeum, perceiving a ſtrange Enemy, becomes enrag'd, diſturbes all the Functions, and renders like to it all the ſubſtance of the Spirits and vital Liquors, till recourſe be made to the juice of Citrons, to which he attributes a never failing faculty, to appeaſe and correct the deliriums of the Archeum kindl'd with rage, without explaining himſelf any other way either upon the nature of the Vipers venome, its operation, or upon the qualities of the juice of Citron; and never ſo much as arguing upon the means, by which he pretends that this ſhould produce effects beyond its force and activity.

The Doctors anticipation in favour of *Signior Redi*'s opinion, upon the juice of the Vipers and the confus'd Idea, which he borrow'd from my attributing the venome of that Animal to the provok'd Spirits, were doubtleſs the apparent reaſon that made him make a bad conſtruction of both. I ſee likewiſe that he rather choſe to ſpare himſelf all manner of pains, and by following the cuſtome of the ancients, to ſay that the juice of Citron fixes the Vipers venome by an occult and poteſtative quality, then to make any experiment, or to examine the parts of the ſame juice, and of the juice of the Viper, which he would have to be the ſeat of the venome; or to endeavour to underſtand the nature of provok'd Spirits, of which he heedleſly makes a union with the yellow juice to perfect the poiſon. For he ſhould have conſidered that the juice of Citron, has a power to corrode, and alſo to unite fix'd and volatile Salts, if it can but come at them; but that all its power nothing avails, when there is the leaſt diſtance between it and them. He ought to have conſider'd that the inſipid taſt of the yellow juice, its thickneſs, its viſcoſity and ſlimineſs, manifeſtly declare, that there is no Salt either fix'd or volatile in it; nor that it is able to enter in at ſuch ſmall holes as the teeth of a Viper make; much leſs to penetrate,

and be carry'd with that ſwiftneſs to the moſt remote parts of the body bitten; I ſay, he ought to have been convinc'd, that ſuch a penetration, ſuch a rapid motion can be attributed to nothing elſe but to the ſpirits; and that only to thoſe provok'd Spirits, of which I have ſpoken, we ought to impute the venome and the cauſe of all theſe mortal ſymptomes that follow the biting of the Viper: that the yellow juice is to be abſolutely excluded, and to be lookt upon as an innocent ſlime in all reſpects, as I have made appear ſeveral times before a great number of Witneſſes; and that it is a ridiculous thing to believe that the provok'd Spirits ſhould concenter and ſtay with the yellow juice after the death of the Viper, or produce any ill effect. Beſides, he ſhould have conſider'd, that though the yellow juice did abound in volatile Salt, or that it were altogether Salt; the juice of Citron, taken at the mouth, not being able to get near it ſo ſoon, nor without being very much alter'd, as it is very evident, could neither operate upon it, or make any fixation; and that it would have been better for him to have kept ſilence with the Diſciples of *Pithagoras*, then to have oppos'd and adulterated, as he has done, the truths contain'd in my book of the *New Experiences upon the Viper*; or to have troubl'd himſelf to have writt'n upon matters that never paſs'd through his hands, and which are altogether beyond his knowledg.

As to what remains, I have too much eſteem for the *German* Nation; and in particular too high a veneration for a great number of curious and learned men which *Germany* has produc'd, and to whom all Phyſick is ſo much oblig'd, for many excellent pieces which they have publiſh'd, to act as this new Author has done; who that he might the better aſſail me, has fall'n upon my whole Nation. I believe there is no diſintereſted Phyſitian in *Germany*, but will blame his behaviour, and who ſeeing my firſt and laſt writings upon the Viper, and comparing them with what my antagoniſt has ſo raſhly affirm'd, but will confeſs my reply to be very rational and moderate, and that I could do no leſs then what I have done. I am perſwaded alſo that a good number of the Phiſitians, to whom I had the honour to be particularly known in *Germany* and in ſeveral other Forraign Countries, will do me the right to undeceive thoſe that think I have any need of a borrow'd pen, to compoſe thoſe little works which I have publiſh'd, or which I ſhall publiſh for the future under my name.

CHAP. XXIX.

Of the Diſtillation of Raſpiſs, *or* Framboiſes, *and* Strawberries.

THE diſtillation of Raſpiſs and Strawberries is one of the plaineſt that is made of Fruits. For when you expect no inflammable Spirit from them, it is ſufficient to take them when they are freſh gather'd, and having bruis'd them, to put them into a glaſs Cucurbit cover'd with a head luted on with paſt of fine wheat flower, and after you have fitted a ſmall Recipient to it; make a diſtillation in *Balneo Mariæ*, between lukewarm and boiling hot, and you ſhall have a water very pleaſing to the taſt and ſcent. But if you deſire an ardent Spirit, you muſt have recourſe to fermentation, which thoſe fruits are very ſubject to, and without any addition, whether you draw forth and only make uſe of the juice, or bruiſe the Fruits, as I have ſaid already. For having fill'd up with either the one or the other, two thirds of a glaſs Cucurbit, and having fitted and luted on to the top a veſſel of Rencounter, if you ſet the Cucurbit three or four days in Sand-bath with a moderate heat, or upon a Bakers Oven, the moderate heat will inſenſibly warm the ſubſtances, ſo as to diſpoſe them to act reciprocally one upon the other, eſpecially the volatile, ſulphury, inflammable, and Salt part upon the Acid, ſo that ſeparating it ſelf by degrees from the more groſs parts, and ſurmounting the Acid, it will be in a condition quite to forſake it, as well as the flegm.

You ſhall underſtand when the fermentation is at the heighth by the winy ſcent which

which you ſhall perceive when you unlute the Veſſel of Rencounter. Then without looſing time, having pour'd the fermented matter into a Glaſs Cucurbit, and having cover'd it with its head well luted, ſet it in *Balneo Mariæ*, or in a Bath of Aſhes or Sand, but moderately hot, and there will in the firſt place aſcend a volatile inflammable Spirit, very odoriferous, which you muſt keep apart in a double Glaſs Bottle well ſtopt. After which you may have ſome ſmall quantity of Water, ſomewhat odoriferous; the vertues whereof will be much inferiour to thoſe of the Spirit.

The Water and Spirit of Raſpiſs and Strawberries, ſerves more for beautifying and preſerving the Complexions of Ladies then for any other uſe; and yet they may be adminiſtred with ſucceſs to comfort and fortifie the noble parts, eſpecially the Heart and Brain.

You may in the ſame manner diſtill black Cherries, bruiſing their Stones well among all the reſt, and make uſe of their Spirit and their Water in Epilepſies, Apoplexies, and other Diſeaſes of the Brain.

CHAP. XXX.

Of the Diſtillation of VValnuts.

THE Diſtillation of green Walnuts is eaſie enough, eſpecially to thoſe who following the method of the ordinary Pharmacy, after they have bruis'd them well, and fill'd a little more then half a Copper Veſſel, or of the body of a Refrigerant well Tinn'd, and pour'd upon it Fountain or River-water, ſome three or four fingers breadth above the ſubſtance, make a Diſtillation of it with a continu'd moderate fire, as of other common Waters, till they have drawn out about two thirds of the moiſture which they put in. But Apothecaries that are careful to prepare their medicines as they ought, are glad to go a little farther then this Diſtillation; for by pouring the diſtill'd Water upon new green Walnuts, they repeat the Diſtillation; and having burnt the ſettlement, and reduc'd it to Aſhes, they extract a Salt by the ordinary ways, and diſſolve it among the diſtill'd Water, to give it more vertue, and to make it keep the longer.

But though this Diſtillation be not to be deſpis'd, yet there is ſtill a better, whereby you may preſerve the principal parts of the green Walnuts, according to the following method: Take a good quantity of bloomings of the Walnut-tree, and having bruis'd them in a Marble Mortar with a wooden Peſtle, ſqueeze out the juice, which you muſt diſtill in *Balneo Mariæ*, or in a Sand-Bath, in Veſſels of Earth or Glaſs, and keep the Water. After which, when the green Walnuts come to half their maturity, take as many as you pleaſe, and having bruis'd them in a Marble Mortar, fill about two thirds of the ſame Veſſels of Glaſs or Earth, pouring upon them the diſtill'd Water of the bloomings, two or three fingers breadth above the ſubſtances; then ſetting them to macerate for the ſpace of four and twenty hours, make the ſame Diſtillation as of the juice of the bloomings; and keep the Water till the green Walnuts have attain'd to their full bigneſs, yet ſo that they may be ſoft and fit to condite, at which time take as many as at firſt, and having alſo bruis'd them, and put them into the ſame Veſſels, pour upon them the Water of the firſt Walnuts, and make a Diſtillation of the ſame as before; and by this means you ſhall have a very good Water of Walnuts; which you may render more efficacious, if after you have reſerv'd and dry'd the ſediment of the Diſtillations, you burn them to Aſhes, and having extracted the Salt, you mix it among the Water.

This Water is call'd by the name of the Water of Three Nuts, by reaſon of the three ſubſequent Diſtillations at three ſeveral times. It is Diaphoretick. It is accounted Cordial; and chiefly commended for the cure of intermitting and malignant Fevers. It fortifies the Stomach and Brain. It is good againſt the ſuffocations of the Mother, and againſt Cholicks, caus'd by wind and flegmatick matters. The doſe is from three or four ounces to ſeven or eight.

Some

Some there are, that after they have dry'd the green Rind of ripe Walnuts, diſtill it with a Cornute in a gradual fire, and draw from it a Spirit charg'd with volatile Salt, and a dark colour'd thick Oil, with much Flegm; of which they afterwards make a rectification in a Matras with a long neck, and draw from it a Spirit containing a volatile Salt, and a clear purple colour'd Oil, very much commended againſt poiſon, and particularly againſt the Peſtilence. Giving the Spirit from ſeven or eight drops to twenty and thirty, in the diſtill'd Water of Walnuts; and the Oil from two drops to eight or ten; incorporated with fine powder'd Sugar, afterwards diſſolv'd in the ſame Water.

You may alſo diſtill in the ſame manner, the dry Shells of Walnuts, and draw from them ſubſtances not unlike the former; the Oil whereof is chiefly us'd to mortifie Ulcers, and kill Tetters.

CHAP. XXXI.

Of the various ſubſtances of Grapes.

THE paſſionate Idolatry of the Ancients, and the pleaſing taſte which they found in Wine, made them ſet up a God to be the Guard of their Vineyards and their Productions, and worſhipp'd him with ſeveral Ceremonies. But they would have much more multiply'd their ſuperſtitions, if they had known all the various ſubſtances which this lovely Plant contains. For it may be ſaid, that Chymiſtry draws more good, curious, and different Remedies from that Plant, then from any other mixt body in the whole ſtock of Vegetals.

Nature, the Sun, Time, and ſomething of Art concur together for the perfect maturity of Grapes: But we muſt make uſe of Veſſels, Time, and Art, for the firſt and more groſs ſeparation of the various ſubſtances, without which they would remain in confuſion, and we ſhould receive from Grapes no other advantage then to eat them as they come from the Vine, or dry'd in the Sun; though they are uſeful in Phyſick, alone or with other medicaments, ſetting apart the ſtone contain'd in the fruit, and the woody part of the Cluſter to be diſtill'd in a Cornute without any forerunning preparation.

It is then in the Juice of the Grapes that theſe various ſubſtances are at firſt confuſedly mix'd; and of which the fermentation that happens in the Cask, makes the firſt diviſion; which is of the clear liquid part, that obtains from thence the name of Wine, from the tartarous part, which ſticks to the ſides of the Cask, and the feculent part, which falls to the bottom, by the name of Lees. Nevertheleſs, the ſeparation of theſe three various liquors hinders not but that they are every one compos'd of various parts, upon which the Chymiſts find work enough to exerciſe themſelves, and reaſon enough to confeſs, that it is not for nothing that I have ſaid, that Grapes ſurpaſs all other mixt bodies in quantity and goodneſs of Medicinal Remedies.

Experience and reaſon demonſtrate to us the truth of this fermentation, in the reciprocal operation and reoperation of the volatile, ſalt, and ſulphury parts with the Acid; as alſo in this, that from that operation and reoperation rebounds the union and preſervation, and not the deſtruction of the pure ſubſtances; the ſpiritualization of thoſe which are inclin'd to it, and the conjunction of thoſe which are not oppoſite, and the rejection and ſeparation of thoſe that are burthenſom to them. Which is apparent from this, that the more acid parts of the Juice, having united to themſelves as much of the volatile Salt as they can bear, and made together one compact and chryſtalline body, mixt with ſome terreſtreity, they ſtick to the inſides of the Veſſel, and become that which we call Tartar, while the part leſs acid, and the moſt part of that which remain'd of volatile, ſaltiſh, and inflammable in the Juice uniting themſelves together, and receiving into their company the watry part of the ſame Juice, make a compoſition, which is the Wine; and that by working and reworking, they cauſe the reſt of the Earth to precipitate to the bottom of the Cask; which nevertheleſs retains to it ſelf ſome

ſmall

ſmall quantity of Acid, and a conſiderable part of the volatile Salt, in part inflammable, as experience teaches us.

CHAP. XXXII.

Of the Diſtillation of VVine.

THE general reflexions which I have made upon the different ſubſtances which the Grape includes within it ſelf, ſeem to me ſufficient and proper enough to make ſuch as apply themſelves to the ſtudy of Chymiſtry to underſtand, that they ought to regulate their operations according to the different compoſure and proportion of the parts which compoſe mixt bodies, and according to the firſt ſeparations which Nature makes of them, eſpecially upon this occaſion. I think it alſo fit to exhort them, never to leave off for the tedioufneſs of the labour, nor to give over upon any ill ſucceſs that may ſometimes befall them; but to ſtudy the more why things have ill ſucceeded, in regard that many times it may prove to be their own fault.

Now out of regard to the lightneſs and ſubtlety of the volatile and inflammable part of Wine, to the quantity of Flegm that is mixt with it, and the ſmall quantity of Acid that remains at ſtake with it, we muſt proceed more gently, and make uſe of other Veſſels, and another ſort of fire for Diſtillation of thoſe parts, then for that of the tartarous part, which having much leſs of flegm, is half fix'd, becauſe of the exceſs of its Acid, and the union which it has made with the moſt conſiderable part of the volatile Salt, which it has drawn with it, as it were for a ſupport. Which is the reaſon, that we never diſtill Wine after the ſame manner as its Lee, which having leſs Flegm, but more volatile Salt hidden within it, requires a particular method for its Diſtillation. Let us then proceed to the Diſtillation of Wine.

Having fill'd with good Wine a little more than half a Veſſel of Copper Tinn'd within, and having plac'd it upon a proper Furnace, cover it with a Moors-head Tinn'd within likewiſe; and having fitted and luted its Serpentine to it, with its Tunnel of cold water, and join'd and luted a Recipient to the Serpentine, make your Diſtillation with a moderate fire, which you muſt continue till the Water looſe its taſte, and will not burn at all. By this means you ſhall have a Water call'd *Aqua Vitæ*, the quantity whereof will not be above the ſixth part of the Wine which you put into the Veſſel. They that are curious may evaporate the remainder by degrees to the conſiſtence of Honey, and draw from it through a Cornute, in a cloſe Furnace of Reverberation, the acid Spirit, which lay in the Wine before Diſtillation; which will be ſtill charg'd with a good quantity of Flegm, and attended with a dark colour'd ſtinking Oil, of little uſe. After which you may burn to Aſhes that which remains in the Cornute, and extract from it a fix'd Salt by the uſual way.

Aqua Vitæ is too well known for me to deſcribe the vertues or uſe thereof.

CHAP.

CHAP. XXXIII.

Of the Diſtillation of the Spirit of VVine.

THe dearneſs & ſcarcety of Wine, is the reaſon that we diſtill leſs wine at *Paris*, then in any other Provinces of the Kingdom, where it is far cheaper. In the moſt part of which, the abundance of Tartar which is found in the Veſſels, hinders not the ſtrong wines from yeilding an excellent Spirit, and in greater quantity then the ſmall wines, where the Tartar has not time to coagulate it ſelf, and to harden in the Casks, which uſually laſt no longer then the wine which you put into them, although thoſe wines do not want their Tartar neither. For the abundance, the goodneſs and the beauty of Tartar, proceed rather from the reiterated Fermentations which ſeveral new wines have made ſucceſſively, and for a good number of years, in ſtrong Casks and made to laſt a long time, then from the ſoil or climate where the wine grows. In regard that the Tartar of *Germany* is altogether as good as that of *Lanquedock*, and which is alſo thicker, by reaſon of the largeneſs and thickneſs of the pipes which they make uſe of. Beſides that the Tartarous part naturally ſeparating from the wine, neither impares the ſtrengh nor the quantity of the Spiritous volatile, and inflammable part of the wine. Of which this is enough to convince us, for that the wines of *Lanquedock* intoxicate ſooner, as having more Tartar, than thoſe whoſe Tartar had not time to coagulate. However the choice of the Spirit of wine is rather to be made by its purity, then from the place where the wine, from whence it was drawn, grew: ſo that if you intend to have it pure, you muſt be careſul to to purge the wine well from its flegm, and to get good natural wine and good *Aqua Vitæ*.

Some there are, that during the diſtillation, fix at the top of the veſſel which contains the wine or the ſtrong water, a piece of courſe paper ſeveral times doubl'd, or ſome piece of courſe cloth, through which while the Spirits paſs, the flegm ſtops and is forc'd to precipitate back again. Others there are, that make uſe of a ſpunge dipt in oil for the ſame purpoſe. But both the one or the other are miſtak'n, in regard that part of the flegm that accompanies the Spirit, will paſs through the the paper, the cloth, and the oil; of which the Spirit of wine may carry with it ſome particles, which may alter the good properties of it.

Theſe difficulties have caus'd the new Artiſts to invent a veſſel, by means whereof you may have, at the firſt daſh, a ſpirit of wine as pure, as if it had been rectifi'd ſeveral times by thoſe ways which I have ſet down; of which the trial which I have daily made, obliges me to give the deſcription of two figures; ſetting aſide, upon this occaſion the uſe of the long neck cover'd with its head, which is to be refus'd, in regard of the length of time which it takes up to rectify a ſmall quantity of Spirit.

The body both of the one and the other of theſe Veſſels is to be of red Copper tinn'd within, having two openings, of which the biggeſt and the principal, being in the upper part, muſt be accompani'd with a neck, fit to receive exactly the lower part of the Serpentine; and the other opening, being upon the ſide a very little below the neck, muſt have a ſmall neck fit to receive upon occaſion one part of the *Cyphon*, or ſmall pipe, as in the firſt figure, or the beak of a funnel, as well to powre in that way the *Aqua vitæ* into the veſſel, as to draw back the flegm by means of the *Syphon*, when the water is diſtill'd. The Serpentine may be made of Latin ſo long as it carries but one glaſs head, which muſt claſp the upper part of the Serpentine, made like a Tunnel. But the Serpentine muſt be of Copper, when it carries a large Refrigerant, and it muſt be ſupported with a pillar of hollow Copper, thick and of good bigneſs, and ſtrong enough to ſupport the Refrigerant, and fortify the Serpertine in its windings. The Refrigerant is alſo to be of Copper tin'd only within-ſide, in that part where the vapors are to aſcend, diſſolve themſelves into Spirit, and drop into the Recipient. I refer the Reader to the figures I have made thereof.

By this means the *Aqua vitæ* meeting with a cloſe pipe, twiſted and very high rais'd, and not able to aſcend ſo high, nor with that eaſe as the Spirit of wine, by reaſon

reaſon of it's own weight, is conſtrain'd to fall back again into the Veſſel whence it was firſt rais'd; provided you order your fire well. And for that intent, after you have plac'd the Veſſel upon a Furnace built on purpoſe, and of a due proportion, fill'd with good *Aqua vitæ* for about two thirds of the Veſſel, and all the jointures of the Veſſel and the Recipient being perfectly well luted, and the Refrigerant fill'd with cold water, kindle in the Hearth-place of the furnace a ſoft Charcole fire, but all alike, and continue it, till the Spirit of wine ceaſe to come pure; which you ſhall know by this, if after you have burnt never ſo little in a ſilver ſpoon, there remain any moiſture at the bottom. At which time nevertheleſs, having chang'd your Recipient, continue the diſtillation, till the water that diſtills ceaſes to burn. By which means you ſhall have an *Aqua vitæ*, which you may afterwards mingle and rectify with the reſt. The Spirit of wine rectified this one time, being fix'd, not only conſumes quite away, but will alſo fire Gun-powder being caſt upon it in a little ſpoon. A man has alſo the ſatisfaction to rectify in this Veſſel ſeveral pints in a day, without much trouble, with little care, and little expence.

Some there are that have giv'n to this Wine the titles of *Eſſence moſt ſubtle and incorruptible, ſulphur Celeſtial, Bezoardick vegetal Sulphur, the Philoſophers key, Raymund Lullies heav'n, The Ethereal body compos'd of water and fire*, &c. But ſetting aſide all theſe encomium's, I dare affirm that this Spirit is very proper to warm and penetrate; as alſo to cut, ſubtillize, diſſolve, to cauſe tranſpiration and diſſipate ill humours, making uſe thereof inwardly or outwardly in Diſtempers that require ſuch effects. That it is a menſtruum and a diſſolver very proper for ſeveral uſes, not only the moſt common, but ſuch as Chymiſtry can be without. So that I may not only call it incorruptible, but able to preſerve the bodies which it keeps within it ſelf, and to reſiſt all putrefaction. It is very ſucceſsfully us'd againſt Gangrenes, and to remove all corruption from the parts. It opens the paſſages and facilitates the communication of the Spirits, and quick'ns the circulation of the blood. It is very much recommended againſt Rhumatiſmes. It is one of the beſt remedies that can be us'd againſt burnings, of which it ſtops the progreſs; not by fixing the acid, which ſome would impute to the particles of the fire, though they equally depend upon the volatile Salt and acid of the ſubſtances which burn, but rather by ſurmounting the ſame acid by its quantity, added to that of the volatile Salt of the ſubſtances burnt, which the acid did counterbalance, by which the violent operation of the fire is enfeebl'd, the fury of the *Archeum* appeas'd, and nature ſtrengthn'd.

This ſpirit nevertheleſs, though very pure to outward appearance, contains yet ſome particles of flegm, which you may leſs'n, by rectifying the ſame Spirit, upon the ſixth part of its weight of Salt Tartar well dry'd, and putting it into the ſame veſſel where it had been rectifi'd, after you have well ſeparated its moiſture, and diſtilling it over a moderate fire, till it aſcend more pure. You may after that dry the ſame Salt again, and having pour'd upon it more ſpirit of Wine, diſtill it again as the firſt time, and make a greater conſumption of the watry parts. For by this means you ſhall have a Spirit of Wine of a good ſcent, and much ſtronger then it was, to which ſome give the name of *Tartariz'd*. But you may make it yet more pure, by putting it into a Matraſs with a long neck, cover'd with its head well luted, and rectifying it again in *Balneo Mariæ* lukewarm, not drawing off above three fourths; then ſetting aſide the ſediment, you may rectifie it three or four times more, ſtill ſetting apart the ſediment. For by this means you will have a Spirit extraordinarily pure and much more effectual than the ordinary Spirit of Wine; ſo that ten or twelve drops of the latter, taken inwardly in ſome proper liquor, will operate more ſtrongly and ſuddenly, than a ſpoonful of the former.

CHAP. XXXIV.

Of the Spirit of VVine *Tartariz'd.*

SOme persons, only regarding the outside of the title of *Tartariz'd*, which Authors have given to the Spirit of Wine, thought it enough to rectifie but once that Spirit over Sal Tartar, to give it the name of Tartariz'd. Not considering, that they could not lawfully give it that name, unless in its rectification it had carry'd off, and united to it self a considerable quantity of the most pure and volatile particles of the Tartar mix'd with it; which is not to be done but by long digestions and reiterated cohobations.

Some there are who put into a Glass Cucurbit two Pints of Spirit of Wine to an ounce of raw Tartar grosly beaten, and distill it in *Balneo Mariæ* with a moderate heat, till it have done ascending pure. They also applaud the rectification of the same Spirit in the same Bath, with a dram of new Tartar bruis'd after the same manner; and having calcin'd the residence of the two Distillations, till they become green or blew, and mingl'd it afterwards with Spirit of Wine rectify'd, they distill the whole with a more powerful fire, pretending thereby to gain a Spirit of Wine *Tartariz'd.* Nevertheless I do not understand how the Spirit of Wine should be able to carry off from these nine drams of Tartar, any thing but the Flegm, and some small portion of their Acid; considering that the Salt part which the same Acid had fix'd, neither could unite nor ascend with the Spirit of Wine. And therefore to bring your design to pass, my opinion is, that you ought to give the Wine its Ferment, and follow that method which I shall shew you, and which I have found to be the best.

Having made choice of good new Wine well fermented, and put for example four ounces in a glass Cucurbit, large and high, pour the Wine upon it little and little, whence will follow an ebullition or fermentation, caus'd by the operation and reoperation of the Acid part of the Wine upon the Sal Tartar, and of the Sal Tartar upon the same Acid. Continue pouring out this Wine by little and little upon the Salt, till the ebullition cease, which will be a sign that the Salt and the Acid are mutually reconcil'd, and then the cohobation of the Salt upon the Wine must cease. At which time, having so order'd it, that about a third part of the Cucurbit may remain empty, place it in a Sand-Bath, and having exactly luted the jointures, and fitted to its beak a small Recipient, luted in the same manner, distill the Spirit with a strong Charcoal fire, to the end the Salt of Tartar, which is somewhat slow to mount, and which otherwise by reason of its own weight would remain among the sediment, may be forc'd to rise and accompany the Acid, in the union which it has made with the Spirit of Wine; and continue the Distillation with the same fire, till there be no sweetness left in the Spirit of Wine that distills forth, or till the Flegm succeed the Spirit. At which time you must put up the Spirit of Wine in a Bottle exactly stopp'd; and believe withall, that it contains more volatile Salt of Tartar, then any other Spirit of Wine, whatever other preparation or purification, or whatever other Instruments you could use. For the Spirit of Wine that has been once well rectify'd, or charg'd with its own proper volatile Salt, and is unprovided of its natural acid ferment, or of some other near of the same nature, can never volatize with it any other Salt. But the hungry acid, that naturally resides among the other substances of green and austere Wine, is in a good condition to load it self with the volatile Salt of Tartar, which an Acid less in quantity would keep in its own bounds.

After the distillation of this Spirit, having by boiling evaporated the insipid flegm of the sediment, and reduc'd it to a consistency of Honey, you may if you please, distill it through a Cornute, according to Rule; and draw from it a Spirit accompany'd with a stinking tartarous Oil, not worth looking after; while that of the Sal Tartar, which has not been volatiz'd, remains at the bottom, and becomes augmented by a small quantity of fix'd Salt, which lay conceal'd in the Wine, though very clean and very pure, as is evident by calcining the sediment, and extracting the Salt by the common ways. Nor is it possible to hinder the union of this Salt from that

that of the Tartar which you made uſe of, by reaſon of the conformity of their ſubſtance, no more then that augmentation, when the acid of the Wine finds any matter to feed upon, as there it happens; where meeting the fix'd Salt of the Tartar, it gathers and unites to it, and embodying it ſelf with it, increaſes the quantity of it, in the ſame manner as if it had been only dry'd and calcin'd in the fire with it; according to the Chymical Phyſical Axiom, *Every corroſive is coagulated by corroſion, and fix'd in Alkali.* Nevertheleſs, after that, thongh in this operation there be a kind of combat between the volatile Acid and the fix'd Salt, and that in this conflict, one part of the volatile Acid fixes it ſelf, and augments the quantity of the Salt of Tartar, which the ſame acid could not carry off the firſt time; however at length it becomes victour, by the aſſiſtance of the pure Sulphur of the volatile Salt of the Wine; for it carries off, and abſolutely volatizes the fix'd Salt of the Tartar, which was before united with the Wine, if you proceed as follows:

Having well calcin'd the ſediment of the firſt diſtillation, and diſſolv'd, filter'd, coagulated, and well dry'd the Salt, you muſt weigh it, then having put it into a Cucurbit, pour upon every half ounce a pint of new fermented Wine, green, auſtere, and well purg'd; and having cover'd the Cucurbit with its head perfectly well luted, and fitted and luted alſo a Recipient to it, ſet in a Sand-bath, and make your diſtillation over a fire like to the firſt, proceeding in all things after the ſame manner, and carefully putting up the diſtill'd Spirit in a Bottle well ſtop'd. Then having again calcin'd the ſediment, and extracted, clarify'd, coagulated, and dry'd the Salt, pour upon it again as many pints as there are half ounces, and diſtill them. Then pour more Wine upon the Salt which remains, and renew the diſtillation, till you perceive that the Salt which remains among the ſediment be not worth the trouble of any more diſtillation. Nevertheleſs you muſt not believe the Sal Tartar to be the cauſe that ſo little remains, but the fix'd Salt of the Wine; though the greateſt part thereof were volatiz'd in the diſtillations among the Tartar. Nor is it to be doubted, but that by often reiterating the infuſions of the Wine upon the ſediment and diſtillations, the Salt may be totally volatiz'd to the utmoſt grain.

But for as much as the Spirit of Wine, which has volatiz'd and carri'd away the Salt Tartar, is charg'd with much flegm, there is a neceſſity of rectifying it well; which may be done according to Art in the Veſſel which I uſe for the rectification of the Spirit of Wine, luting exactly the jointures of the head and Recipient; or elſe in a Matras with a long neck, cover'd with its luted head, and plac'd in a Bath of Aſhes or Sand, over a moderate fire.

The ſmell and taſt of this Tartar, gives evident and undoubted proofs of the Sal Tartar which it has rais'd and volatiz'd, in the repeated diſtillations made of the Wine upon the fix'd Salts of the ſame Tartar. We may alſo very lawfully call it *Tartariz'd*, ſince it contains in it a true Salt of Tartar, which the Acid of the Wine has ſeparated, volatiz'd, and united to it ſelf. I ſay, that this Spirit has a better claim to this title, then that which was but barely diſtill'd upon the Salt Tartar; and that if it carry'd away nothing of this Salt, it would receive no other advantage, then that of the diminution of its watry part. You may alſo give to this Spirit of Wine the title of *Alkaliſy'd*; becauſe it contains within it ſelf a true Sal *Alkali* volatiz'd; and in regard that ſome have tak'n this preparation for a real volatization of Sal Tartar.

CHAP. XXXV.

Of the Diſtillation of Tartar.

TArtar is a ſubſtance embodied, and as it were petrify'd to the ſides and bottom of the Veſſel which contain'd the Wine, being ſeparated from the Muſt by fermentation, which chang'd the ſame Muſt into Wine. This Tartar, thus altogether ſeparated from the Wine and the Lee, is nevertheleſs compos'd of the five ſubſtances which Chymiſtry acknowledges in the compoſition of all mixt bodies;

for it contains the Flegm, the Acid part, the volatile and fix'd Salt, the Oily and Terreſtrial, as is evident by its diſtillation. And though the union of its parts, and the ſolid conſiſtency which they have taken, be not proof againſt the heat of the fire, but they are diſſolvable not only in hot water, but in cold, (like Lime) when they have paſt through the fire; their union nevertheleſs is faſt enough, not to diſſolve in the Wine, which environs them in the Veſſel; where they increaſe every year by the conjunction of the Tartar of the new Wine, which is refill'd into the Veſſels, and left there to ferment.

You may make uſe in this diſtillation of raw, fair, and gliſtering Tartar, groſly ſtamp'd, or if you pleaſe, pulveriz'd, waſh'd and dry'd; or elſe of Cream of Tartar; and put four pound of one of the two into a large Cornute of Fullers Earth environ'd with lute, and having plac'd it upon a cloſe Furnace of Reverberation, kindle therein a ſoft fire, and continue it ſo long till almoſt all the watry part of the Tartar be diſtill'd. After which, having fitted and exactly luted to it a large Recipient, encreaſe the fire by degrees, and at length to the utmoſt degree of heat, and ſo great, that after the Recipient ſhall have been along time fill'd with white Clouds, which will diſſolve in ſmall drops, mingl'd with the Spirit, all the liquor may be gather'd together at the bottom of the Recipient, and ſhall be become altogether very clear. At which time, having tak'n away the fire, ſtopp'd up the ports and Regiſter of the Furnace, and let the Cornute cool, you muſt unlute the Recipient, and having put two pound of Bread Biſcuit pulveriz'd, into a large Matras with a long neck, and pour'd upon it all the liquor contain'd in the Recipient, cover it with its head well luted, and having fitted and luted to it a ſmall Recipient, make a rectification in *Balneo Mariæ*, or in a Bath of Aſhes over a moderate fire, which you may repeat once or twice upon new Bread-Biſcuit; by which means you ſhall have a pure and penetrating Spirit, very proper for all the uſes for which it is deſign'd.

I have ſaid, that you may in this diſtillation make uſe of raw Tartar groſly bruis'd; becauſe the terreſtrial part, which is uſually mixt with it, not aſcending at all in diſtillation, hinders not the volatile parts from riſing. Though they that will both pound and raſh it may, or elſe make uſe of Creme of Tartar. I alſo never put above four pound of raw Tartar into a Cornute; becauſe that by ſwelling at the beginning of the diſtillation, it might burſt the Veſſel were it fuller, and if there were not ſpace enough to give it room when it ſwells.

You may according to the practiſe of ſome, pour the liquor of the Recipient into a Cornute of courſe Paper moiſten'd, plac'd within a Glaſs Tunnel, to the end, that the Spirit having paſs'd through the Paper, and the black and ſtinking Oil being there ſtopp'd, you may put them both apart in Bottles. But beſides, that in rectifications, the Spirit unites and riſes with ſome particles of the volatile Salt, which the Oil had ſeiz'd, you may have at the ſame time a volatiz'd Oil, yellow, pure, and eaſie to ſeparate; the vertues, the internal and external uſe whereof, are much more conſiderable then all that can be expected from the ſtinking Oil, which you may reſerve.

Nevertheleſs ſome have pretended to affirm, that there can be no volatile Salt mingl'd with the Spirit of Tartar; alledging, that if it were ſo, ſome ebullition would appear, and ſome heating of the Veſſel when you pour an acid upon the ſame Spirit; and becauſe that does not happen, therefore there is no volatile Salt. But the conſequence is very ill grounded; for the acid Spirit of Tartar having fix'd the volatile Salt which it rais'd; and the ſame Salt finding it ſelf overmaſter'd, and as it were enchain'd by that Spirit, which hinders its action, cannot after that ſtir up any heat or ebullition, whatever acids you lay upon it; as may be obſerv'd in the preparation of Tartar vitrioliz'd. For though the conjunction of the Oil of Vitriol with the Sal Tartar, preſently and for ſome time excite great ebullitions and much heat, as well in the matters as in the Veſſels, nevertheleſs theſe accidents quite ceaſe, ſo ſoon as the Sal Tartar finds it ſelf ſufficiently charg'd with the acid; nor muſt you expect after that, any ebullition or heat, whatever acids you pour upon the Salt. This may convince us alſo, that the acid part of Tartar, naturally inclin'd to unite it ſelf with the Salt, fails not to carry away with it in diſtillation, as much as it can, as does the acid part of new green Wine, of which I have ſpok'n in the foregoing Chapter. We may alſo be aſſur'd, that the Spirit of Tartar would never be a good Diaphoretick, as it is, if it did not borrow that quality from the volatile Salt, which it carries away with it in diſtillation.

The

The Spirit of Tartar is very much recommended, to expel from the circumference to the Center, by ſweet or by inſenſible Tranſpiration, a crimonious or corroding humours, which are the uſual cauſe of ſcurfs, Eriſipela's, and many other diſeaſes of the Skin. It is us'd alſo with ſucceſs, to provoke ſweats in Rheumatiſms, diſtempers of the throat, Pleuriſies, as alſo in venereal diſtempers, it produces good effects in all obſtructions of the Liver, of the Spleen and all the bowells; and particularly in Cachexies, dropſies, jaundies, and ſtoppage of the courſes. It is giv'n from one ſcruple, to one dram and alſo to two, in convenient Liquors. It is mingl'd with other Spirits, and among the reſt with equal parts of the Spirit of Treacle Campher'd, and Spirit of Vitriol, which mixture is call'd by the name of ſimple mixture, and is commonly us'd in the Northern Countries.

For the ſame diſtempers you may make uſe of the oil rectifi'd, and give it from two drops to eight or ten, incorporated with a little fine powdred Sugar, and diſſolv'd in proper Liquors. It may be alſo mingl'd with oil of nutmegs, to make a balſome thereof to ſmell to, as well in hiſterick diſeaſes, as in thoſe of the brain and againſt peſtilential Air.

Nor is the black maſs that remains in the Cornute after diſtillation, to be accounted a *Caput Mortuum*, in regard that among the Earth, which is the firſt principle, it contains the moſt part of the Salt, which one part of the fix'd, in uniting it ſelf to it; which you may ſave, by ſeparating it from the Earth by leviviation, filtration, and coagulation, of which you may make uſe as well in the corroding and diſſolving of mix'd bodies, and for the precipitating thoſe which are diſſolv'd by the acids, as alſo for ſeveral other caſes, as you may obſerve in the ſubſequent diſcourſes.

CHAP. XXXVI.

Of the Diſtillation of Vinegar.

I Do not here undertake to ſpeak of a great number of Liquors, become eagre, by natural or artificial fermentation, to which ſome authors have improperly giv'n the name of Vinegar. But I keep my ſelf cloſe to that of real Vinegar, or rather, wine become eager by the alteration of the parts, and the predomination of the acid above the reſt. Nor will I trouble my ſelf with the opinion of thoſe, who have believ'd either without reaſon or experience, that the wine would not have become eager but by the total deſtruction and diſſipation of the volatile and inflammable part. Only I will ſay this, Vinegar being compos'd of much Flegm, of little volatile Salt, but much fix'd, and good ſtore of acid, both the one and the other united and mix'd with ſome terreſtreities; yet Chimiſtry has ways to ſeparate and diſplay the exiſtence of all the parts.

In the alteration which happens to good wine, when it turns to Vinegar of it ſelf, the acid part having united to it and fix'd the volatile Salt of the wine, and finding it ſelf more ponderous than the Flegm permits it to aſcend firſt in diſtillation, and the Flegm laſt. This may be made out in pure Vinegar and not counterfeited, particularly in that of *Languedock* and *Provence*. In thoſe Countries I ſay, where the Vinegar is not counterfeited, in the diſtillation of Vinegar, you ſhall be ſure to draw forth at the beginning an inſipid Flegm, though mixt with ſome very little quantity of the volatile Spirit: but at *Paris*, you ſhall hardly draw any diſtinct Flegm from Vinegar, by reaſon that the Vinegar-makers do ſo counterfeit it. Whence it comes to paſs that we rather take all that aſcends in diſtillation, then trouble our ſelves to deflegmate the Vinegar; and that we rather take heed that the ſetttlement do not ſcorch at the end, and give the Spirit the ſcent of *burnt-too*.

The better then to bring your purpoſe to paſs, fill with the beſt wine Vinegar that can be got two thirds of a Cucurbit of Potters Earth, able to withſtand the force of the fire, and having cover'd it with its head ſlightly luted, place it upon a fit Furnace, and having kindled a moderate fire, and fitted a Recipient to the beak of the head, begin and continue the diſtillation, till you have drawn out about two

thirds

thirds of the Vinegar which you put into the Cucurbit; then putting in freſh Vinegar heated before, in the place of that which you have drawn off, continue the diſtillation, and keep in ſome great bottle all the diſtill'd Spirit together; pouring in again freſh warm Vinegar into the Cucurbit, and purſuing your diſtillation, with a moderate heat, till you have a ſufficient quantity of Spirit, and that the ſediment increaſing and thickning, conſtrains you to change your veſſel, and to pour out the reſidence into a Cornute, for the extraction of the laſt Spirit, which will be attended with a ſtinking black oil, leaving at the bottom dry fæces, containing the fix'd Salt and the Terreſtrial part of the Vinegar.

Generally we make good proviſion of the firſt Spirit, for the great uſe thereof in the diſſolving of Pearl, Coral, Crabs eyes, Lime of lead, and ſeveral other ſubſtances of the ſame nature; not to ſpeak of the inward and external applications, in moſt maladies, and in ſome Compoſitions.

We ſeparate the laſt Spirit from the ſtinking oil, by means of a Cornet or horn of waſt paper moiſten'd in water, as we do oil of Tartar, and uſe it in the diſſolution of certain metals or metallick ſubſtances, which the firſt Spirit of Vinegar is not able to penetrate. Some give it the name of *Radical Vinegar*. The oil is good againſt Hiſterick vapours, by reaſon of its ill ſmell; but the chiefeſt uſe thereof is to cleanſe Ulcers.

The mark or ſettlement of Vinegar we calcine in a Crucible, to ſeparate afterwards the Salt by diſſolution, filtration and coagulation; you may alſo if you pleaſe, turn it into Chriſtals. Some barely diſſolve this Salt in the firſt or ſecond Spirit to redouble their ſharpneſs: But they might make a more inward Union, by putting four ounces of this Salt into a Cornute of Glaſs, and having pour'd upon it a pound of the one or the other of theſe Spirits, and plac'd the Cornute in a cloſe Furnace of Reverberation, make the diſtillation with a gradual fire, and reiterate cohobation and diſtillation, till the Spirit have carry'd away all the Salt. This Spirit is call'd *Alkaliſy'd*, or *Radical*, and that much more juſtly than the ſecond Spirit of Vinegar, for being more pure and intimately united with its proper Salt, it is more powerful to diſſolve Mettals.

We alſo prepare a Spirit of Vinegar with equal parts of good honey and good Vinegar, which we afterwards digeſt together for fifteen days in a glaſs Cucurbit, large and high, cover'd with its head, and plac'd upon a Bakers oven, and then diſtilling it after in *Balneo Mariæ*, or in a Sand-bath with a moderate heat, you ſhall draw forth a Spirit, which you may rectify once or twice to make it more ſubtle and penetrating, as alſo very proper for the diſſolution of Pearls, Coral, and ſuch like pretious Stones.

In the ſame manner you may diſtill an acid Spirit from *Spaniſh* wine turn'd ſowre, as alſo from Beer, Cider, Perry, or any other ſuch kind of fermented ſowre juices.

CHAP. XXXVII.

Of the Diſtillation of Sugar.

SUgar is variouſly diſtill'd; for ſome after they have put it into a large and high glaſs Cucurbit, cover'd with its head, and plac'd in a Sand-bath, make a gradual fire, ſoft at the beginning, and ſomewhat quicker toward the end; and draw forth a ſpiritous acid water accompani'd at length with an Oil that ſwims at the top, which they ſet apart, rectifying and ſeparating, in an evaporating bath, the watry part from the ſpiritous. Others mixing the Sugar poudred with equal parts of Glaſs or Flint bruis'd or brok'n to pieces, and putting the whole into a large glaſs Cornute very well luted, and plac'd in a cloſe reverberating Furnace, make a diſtillation thereof with a gradual fire, very violent toward the end, and they draw forth a Spirit and an oil mix'd with a good quantity of Flegm, which they rectify five or ſix times upon the reſidence calcin'd, to take away the ſcent of the fire from the Oil and the Spirit. But there is a diſtillation to be made of Sugar very curious

and

and very profitable, and by that means to convert it, and make it aſcend altogether in an inflammable Spirit, proceeding according to the following method.

Take a pound of unrefin'd Sugar, and an ounce of Beer yeſt, and having put them together in a barrel, or in any other wooden veſſel, pour upon it eight pints of boiling water; then having well mix'd the whole and ſtopp'd the Veſſel careleſly, leave it in that condition for four and twenty hours, at what time the ſubſtances will begin to boil, and ſoon after they will boil ſo fiercely, that they would go near to break the Veſſel were it cloſe ſtopp'd, or that the ſubſtances had not room enough for their quick and violent fermentation. At which you need not wonder, conſidering that the Sugar, containing in it a great quantity of Ferment, and having therewithall to furniſh other ſubſtances, it's particles finding themſelves extraordinarily mov'd by addition of the yeſt, and the mixture of the boiling water, beſtir themſelves with much more violence than ſubſtances which have leſs of natural fermentation to forward and redouble their fermentation. Then you muſt empty all the liquor into a glaſs Cucurbit cover'd with his head perfectly well luted, with a Recipient fix'd to it, and make a diſtillation in *Balneo Mariæ* or in in a bath of Aſhes or Sand with a moderate fire, and you ſhall draw forth an imflammable Spirit, follow'd by a Flegm, which may be ſeparated by Rectifications. Then putting the reſidue into the firſt veſſel, and pouring the Flegm upon it, cover and ſtop the whole ſlightly up; and leaving it in a Cellar for two months, make a new diſtillation in the firſt Cucurbit, cover'd with its head luted, and you ſhall have an inflammable Spirit which you may rectify as at firſt; and you will find that the two rectified Spirits put together will weigh as much as the Sugar, when it was firſt us'd. By which it appears, that it was all converted into volatile and inflammable Spirit.

The vertue of the inflamable Spirit of Sugar, are very near the ſame with the Spirit of ordinary Wine; for it equally warms, cuts, diſſolves and dries. But it is chiefly us'd for diſeaſes of the breaſt. It has alſo this peculiar quality to mix and unite it ſelf perfectly with Aromatick diſtill'd Oils, which uſually ſwim at the top of the waters. and makes them fit to be united with all ſorts of Liquors. The doſe is from half a dram to two, in convenient Liquor.

CHAP. XXXVIII.

Of the diſtillation of Manna.

I believe I have ſufficiently explain'd the nature of Manna in the ſecond part of this work, to diſabuſe thoſe who have hitherto tak'n it for a kind of dew. For all that which we uſually ſee, is nothing elſe but a condens'd juice falling from two ſorts of Aſh-trees that grow in *Calabria*, and is condens'd by the heat of the Sun, as are divers other juices and tears or gum-drops, diſtilling from other trees in ſeveral parts of the world. For which reaſon I add the diſtillation of Manua to that of the parts of Vegitals, and I put it next to that of Sugar, becauſe the parts thereof are much of the ſame nature, and for that it contains as much or more ferment than Sugar.

There is no neceſſity of mixing any thing with Manna, when you go about to diſtill it. It is ſufficient to put it as it is brought us, into a Cucurbit of Glaſs, leaving three fourths, or at leaſt two thirds empty, and having cover'd it with its head very well luted, and fitted to its beak a Recipient luted in the ſame manner, make a diſtillation thereof in a Sand-bath with a moderate fire, and you ſhall draw forth a water almoſt inſipid, which you are to keep apart. Then having alter'd the Recipient, and augmenting the fire by degrees, and diſtilling it till you can diſtill no more, you ſhall find in the Recipient an acid Spirit, which you muſt rectify, to take away the *Empirema*, or ſcent of the fire, acquir'd in the firſt diſtillation. You may alſo keep it apart, or mix it with the firſt water, to make it more efficacious, and more apt to provoke Sweats, which is one of its many properties. It is alſo us'd to diſſolve Sulphur, and to draw from thence a tincture good for diſeaſes of the breaſt.

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The water may be giv'n, reinforc'd with its Spirit, from a dram to half an ounce in the water of *Meadow-ſweet*, or bleſſed Thiſtle, or in any other convenient Liquor; and the tincture of Sulphur may be giv'n from three to four, to ten or twelve drops in any Pectoral Liquor.

Manna may be alſo very properly diſtill'd in a Cornute, in a bath of Sand, with a ſoft fire at the beginning, then increas'd by degrees, and continu'd till nothing diſtill from the Cornute: then ſprinkle upon the Reſidue the diſtill'd Liquor ſeveral times and repeat the diſtillation as often, and you ſhall have a ſpiritous water, containing all the beſt of the Manna, and not only an excellent ſudorifick, but a wonderful ſpecifick againſt all ſorts of intermitting Agues, giving it at the beginning of the fit, in the ſame doſe and in the ſame Liquors as the former.

You may alſo draw out of Manna an ardent Spirit, making uſe of beer yeſt, boiling water, and the ſame digeſtions and diſtillations, as for the inflammable Spirit of Sugar.

CHAP. XXXIX.

Of the Diſtillation of Cinnamon.

THe deerneſs of Cinnamon, and the difficulty to have it good, is the reaſon, that we do not uſually diſtil the oil in *France*; and that many are contented only to draw out a Spiritous water, impregnated with its oily volatile Salt, becauſe the uſe of it is more common, then that of the oil, which many rather chooſe to ſend for out of *Holland*, then to trouble themſelves to diſtill it. Nevertheleſs I will here inſert the method which is to be us'd for the diſtillation both of the one and the other, beginning with that of the water.

Take a pound of the beſt Cinnamon you can get, and having ſlightly bruis'd it and put it into a Copper veſſel well tinn'd within, pour upon it three pints of good white wine, and as much diſtill'd Balm water; then having cover'd it with its Refrigerant tinn'd likewiſe and well luted, and having alſo fitted and well luted a Recipient to it; after a maceration of twelve houres, put it upon a proper furnace, and having fill'd the Refrigerant with cold water, begin the diſtillation with an immediate quick coal fire, to looſen the Spiritous oily and volatile Salt part, and to cauſe it more quickly to aſcend; and continue the fire, till the water be almoſt inſipid; keeping however apart of the firſt and ſecond pint of water, which you ſhall diſtill; as alſo of the third which follows; as being, from degree to degree, one better than the other. Take care in the mean time to change the water in the Refrigerant every foot; to the end that the aſcending vapours may the ſooner diſſolve into water. It will be ſo much the better alſo if the Refrigerant be not too high rais'd, to facilitate the diſtillation of the oily part of the Cinnamon, which cannot but with great difficulty aſcend very high, no more than the oil of the moſt part of other Aromaticks. You may make uſe of the laſt water for the diſtillation of new Cinnamon, inſtead of the Balm water which I directed, and keep the two firſt pints of diſtill'd ſpiritous water each of them apart or mix'd together.

The Spiritous water of Cinnamon is good, ſpeedily to comfort and fortify the more noble parts, aud principally the heart. For which reaſon it is giv'n with ſucceſs in ſwooning and fainting fits. It excites the natural heat of the Stomach, it helps digeſtion, ſtays looſeneſs, expells wind, and eaſes Coliques, which are caus'd thereby. It is much commended alſo to facilitate the birth, to ſtrengthen women in labour, and to eaſe their pains. It is alſo very good to provoke the Courſes, and to expell the vapours that riſe in the Matrix. It is giv'n alone from a quarter of a ſpoonfull, to a ſpoonfull when there is any neceſſity. But it is better to keep to the leſſer doſe, eſpecially when you take it oft'n.

To diſtil the oil, after you have made choice of a pound of excellent Cinnamon, ſlightly bruis'd, and put it into a Copper Veſſel well tinn'd, moiſt'n it with a little good whitewine, and pour upon it ſix pints of Fountain water. Then having cover'd

ver'd the Veſſel with a Refrigerant well luted, let it ſtand and macerate till morning, and then make the diſtillation, obſerving the ſame method in all things as in the diſtillation of Cinnamon-water, only that there will be no need to keep the diſtill'd water apart, and that you muſt take away the fire when the water is almoſt inſipid; at which time let the diſtill'd water cool and ſettle, and ſeparate from it that Oil which will be faln to the bottom, putting it up in a glaſs Bottle perfectly well ſtopp'd. Then having preſs'd and ſtrain'd out the reſidue in the Veſſel, and put in the room thereof a pound of good new Cinnamon ſlightly bruis'd, pour upon it not only the diſtill'd water which you ſeparated from the oil, but alſo the liquor preſs'd out of the ſediment; and having cover'd the Veſſel with its Refrigerant, and proceeded in all things as in the firſt diſtillation, you ſhall find at the bottom of the diſtill'd water, a little more oil, which you muſt ſeparate and put very charily. You may then ſqueeze the reſidence again, put new Cinnamon into the Veſſel, and pour upon it the diſtill'd water and the ſqueezings, and repeat maceration and diſtillation in the ſame manner as before, and renew the ſame operation for ſeveral times one after another, and you ſhall have every time more and more oil; becauſe that the water which is once ſufficiently charg'd with the oil, more eaſily permits that which it has rais'd with it in diſtillation to precipitate to the bottom. You may alſo make uſe of this diſtill'd water inſtead of that of Cinnamon. But if after you have put it into a Glaſs Bottle well ſtopp'd, you expoſe it for ſome days to the Sun, if it be Summer, or upon a Bakers Oven at another time, you ſhall find ſome ſmall quantity of Oil, which will be precipitated to the bottom.

Some there are, that for this diſtillation would have you to put among the Cinnamon, about an ounce of Niter, or Sal Tartar, or raw Tartar; believing that the Salts, by piercing the Aromaticks, will ſeparate a larger quantity of Oil from the terreſtrial parts. But as I have ſaid before, the great diſpoſitions which the Salts have to unite with the Oils, rather occaſions a diminiſhment then an augmentation of the Oil.

The vertues of the Oil of Cinnamon are much the ſame with that of the Spiritous Water. Nevertheleſs it works in a leſs quantity, being of a ſubſtance more pure, more ſubtle, and more ſubſtantial. And therefore you muſt not give above one or two drops at a time. It is alſo more proper then the Water to mix in Opiats, Tablets, and Pills, and many other ſolid medicines; and among the reſt in odoriferous Balſoms, to be carried in the Pocket; though it is mix'd ſometimes in liquors, being incorporated with a little fine powder'd Sugar, or diſſolv'd in ſome ſmall quantity of the inflammable Spirit of the ſame Sugar.

CHAP. XL.

Of the Diſtillation of Cloves.

THE Clove is not ſo dry a ſubſtance as the Cinnamon; it contains alſo much more Oil, as you may perceive by bruiſing it, but much more by diſtilling it, which may be done much after the ſame manner as Cinnamon. But the beſt way is to make a kind of putrefaction firſt, to make a more intire diſſolution of the parts of the Clove, and to make the volatile Salt and oily part more apt to leave the terreſtrial part. But you muſt not obſerve the ſame method for the diſtillation of Cinnamon, whoſe ſubtle parts being much leſs in quantity, and much more ſubject to diſſipation, will not endure a long maceration, without a notable diminution of their quantity, and a great alteration of their proper ſubſtance.

Take for example a pound of Cloves, and having groſly bruis'd them, and put them into a glaſs Cucurbit, and pour'd upon them four pints of Fountain-water lukewarm, cover the Cucurbit with a Veſſel of Rencounter, perfectly well luted. Then having put it twelve or fifteen days upon a Bakers Oven, unlute the Veſſel, and pour the ſubſtances into a Copper Veſſel Tinn'd within, cover'd with its Refrigerant; and having plac'd it upon a proper Furnace, and having exactly luted all

the jointures, as alſo thoſe of the Recipient, make a diſtillation with an immediate quick Coal-fire; ſhifting as occaſion requires, the water of the Refrigerant; and continue it till you have diſtill'd about two thirds of the moiſture which you put among the Cloves. After which, letting the Veſſels ſtand till they are half cold, ſeparate by inclination, the ſpiritous Water that ſwims above the Oil in the Recipient; and having put up the Oil in a ſtrong Bottle well ſtopp'd, unlute the Veſſel, and pour the diſtill'd Water upon the remains; then lute on the Refrigerant again, and renew the diſtillation as before. By this means you ſhall have a certain quantity of Oil, which the firſt diſtillation could not raiſe, which you may add to the firſt, keeping the diſtill'd Water apart for other uſes.

You may alſo, after a maceration of the powder of Cloves for twelve or fifteen days, make a diſtillation thereof in a Glaſs Cornute, plac'd in a Sand-Bath over a moderate fire; and having made the ſame ſeparation of the Oil, and the ſame cohobation of the Water upon the reſidue, make a new diſtillation, to the end you may ſave all the Clove contains of volatile oily Salt.

Some there are, who never adding any moiſture to the Cloves; but having groſly beaten them, and put them into a glaſs Cornute, diſtill them in a Sand-bath, with a gradual fire, and extract from thence a ſpiritous water, and a volatile ſalt Oil. But the *Empyrema*, or fierce ſcent and quality which the Oil contracts this way, is the reaſon that this method is not ſo much obſerv'd.

Nevertheleſs, Cloves may be diſtill'd by deſcent to very good purpoſe, if after you have ſtretch'd a fine Linnen Cloth upon a large glaſs Tunnel, plac'd upon a proper big-bellied Viol, and faſten'd it round about the Tunnel, and ſpread about an ounce of powder of Cloves, upon the Cloth, you cover with aſhes the hollow of a Silver or Lattin-plate, proportionable to the mouth of the Tunnel, and having put upon the aſhes the live embers of a ſmall quick fire, ſqueeze the bottom of the plate upon the powder of Gillowflowers. For by continuing to lay a few freſh Coals upon the aſhes that lye in the Plate, the Oil and ſpiritous Water of the Cloves will diſtill by little and little into the Viol, and the powder will remain dry and inſipid upon the Cloth. After which, having put freſh powder upon the Cloth, proceed in the ſame manner as before. And you may continue this operation by making uſe of ſeral Veſſels at a time, till you have as much as you deſire.

You would have but very ill ſucceſs, ſhould you diſtill Cinnamon in the ſame manner, whoſe ſubtle and volatile parts would diſſipate, inſtead of falling down, and leave nothing but ſome few drops of inſipid water.

Oil of Cloves is very much commended to fortifie the heart and the brain, and all the noble parts. It is giv'n with good ſucceſs in cold diſeaſes of the ſtomach, and the inteſtines, in thoſe of the matrix, as alſo to haſten the circulation of the blood, and to eaſe thoſe that are troubl'd with the Scurvy. It is giv'n from one to two or three drops, incorporated with fine powder'd Sugar, and ſteep'd in ſome proper liquor. It may be alſo mingl'd in Bolus's, Pills, Opiats, Tablets, and ſeveral other medicines. It may be alſo us'd in odoriferous Balſoms, and ſo anoint the ſtomach, having incorporated it with preſs'd oil of Nutmegs. Dipp'd in Cotton it is put into rotten teeth to aſſwage the pain. The ſpiritous water of Cloves may ſerve almoſt the ſame uſes, giving almoſt the ſame doſe as of the ſpiritous water of Cinnamon.

Nutmegs and Mace may be diſtill'd in a ſmall Copper Veſſel Tinn'd, and cover'd with its Refrigerant, proceeding as I have directed in the firſt diſtillation of Cloves. But the ſmall quantity will neither pay for the Spice nor the workmanſhip; beſide, that it is more eaſie and more beneficial to extract thoſe oils by the Preſs, without any farther trouble. Nor need I trouble you with thoſe preparations here, having already giv'n directions in the *Galenick* preparations.

You may alſo in the ſame manner diſtill with a Refrigerant Cubebs, Amomum, Cardamums, Pepper, and ſuch like Aromaticks.

CHAP.

CHAP. XLI.

Of the Distillation of Camphire.

THose Authors who have written of the Distillation of Camphire, have labour'd and taken a great deal of pains, in my judgment, altogether in vain. For out of the hopes which they had to be able to prepare something better then what nature had perfected, after they had toil'd themselves without success, yet being willing to make the best of a bad Market, they put to publick view distillations hardly to be maintain'd. And I think they had done better, not to have undertaken to distill it, in regard that as it is brought to us, it surmounts in purity, subtlety, volatility, and penetration, all that can be extracted by distillation, whatever care, skill, mixture, or whatever Vessels they can make use of. Its transparency and whiteness equalling that of Snow; its sharp and picquant tast, its extraordinery strong smell, its volatility, its quick dissipation, its inflammability in the very water, and its total consumption of its self, without leaving any fæces in the Vessels where it is set on fire, sufficiently testifie the purity and the subtlety of its parts. So that we may safely say, that all the inventions of Chymistry are not able to enhance the purity or the perfection which nature has giv'n to Camphire; nor to separate any gross part; and that the greatest kindness we can do it, is to leave it in its own natural condition, and not to bestow upon it any preparation, which will but destroy or alter its good qualities.

For if the distillations which Authors have propos'd, be well examin'd, it will be found, that after the inevitable dissipation of the greatest part of the Camphire intended to be distill'd, and after a considerable expence, as well for the substances as for the Vessels and the fire which must be us'd, that which shall be distill'd, or if they so please, rectify'd, shall not come near those perfections which the Camphire had before distillation. For which reason I thought it needless to give any directions in it. It being enough for me to tell those that desire an oil, or oily liquor from Camphire, that they must dissolve it in oil of sweet Almonds, or in Spirit of Wine or Turpentine, which may be done in a Matras perfectly well luted, plac'd in *Balneo Mariæ*, or in a Bath of Embers, over a very moderate fire. Nevertheless pure Camphire will work more efficaciously then all these liquors.

Some make use of *Aqua Fortis*, or Spirit of Niter, to turn the Camphire into an oily substance, which swims above the Spirits. But this preparation is not at all to be regarded; for besides the violence of these corroding Spirits in dissolving the Camphire, they convey a great quantity of their particles into it; the acrimony whereof is too much to be suspected, especially when it is to be giv'n inwardly.

Camphire is very much esteem'd in times of contagion, as also to resist ill air, and the putrefaction of humours. It is very good against the vapours of the Matrix, as well tak'n inwardly, as held to the nose, or dissolving it in Clysters. The ancients believing it cold, commended it to extinguish the heat of lust, and to hinder generation; which occasion'd the Proverbial Verse,

Camphora per naſes caſtrat odore mares.

Camphire but only to the Nostrils held,
By scent alone the lustful Male doth geld.

But because sence and reason manifestly convince us, that it is hot, we must absolutely impute all the effects which it produces, to the subtlety and penetration of its parts. The dose is from one grain to three or four, beaten first, and dissolv'd as it were in a little Spirit of Wine or Oil of sweet Almonds, then steep'd in some proper liquor. It is also mingl'd in hysterick Clysters, from three or four grains to ten or twelve. It may be put also about a grain into hollow teeth, or else dissolv'd in Spirit of Wine for a Gargarism, to ease the pain of the tooth-ach.

CHAP. XLII.

Of the Diſtillation of Turpentine.

I Will not undertake to ſet down here in particular, all the different methods of diſtilling many ſorts of Gums, in regard that the diſtillation of Roſin, which is aliquid Gum, may ſuffice for all. Take, for example, two or three pound of Turpentine, and having put them into a large glaſs Cornute, plac'd in a Sand-bath, and having fitted a well luted Recipient to it, begin the diſtillation with a moderate fire. So ſhall you preſently draw forth an acid Spirit accompany'd with water, and an ethereal volatile inflammable Oil, very clear, to which will ſucceed another of a pale yellow, and by and by another of a perfect yellow, and laſtly another which will be red. You may if you pleaſe receive all theſe Oils apart, and put them up in ſeveral bottles well ſtopp'd. But if you make uſe of a long bottle for a Recipient, without changing it till the end of the diſtillation, you ſhall perceive all theſe Oils as it were ſwiming one above another; of which the red at the bottom ſhall be ſurmounted by the yellow, the yellow by the Lemon colour, the Lemon colour by the white, and the white at length by the ethereal, provided your fire be rightly order'd. Theſe Oils have very near the ſame vertues, but they operate more or leſs, according to the degree which they keep higher or lower in the Recipient, and according as they are paler or deeper colour'd. The loweſt degree, which the deepeſt colour'd keep in diſtillation, being a certain ſign of the weight of their ſubſtance, and their inability to imitate the activity and penetration of thoſe that keep above.

You ſhall find in the loweſt part of the Cornute the thickeſt part of the Turpentine, which is that which ſome Authors call *Colophonium*, from whence you may extract the very hindmoſt acid Spirit, increaſing the fire, and at length a dark colour'd Oil; but it will be better to let it alone, and to keep that *Colophonium*, and to make uſe of it in Ointments and Emplaiſters, and other external remedies.

Some there are, that in the diſtilling of Turpentine, mingle water with it; others cover it with fine Flax, to hinder its ſwelling, and to prevent it from running into the Recipient through the beak of the Cornute. But there is no need of being ſo cautious, provided your fire be well order'd, eſpecially at the beginning of the diſtillation.

The volatile Salt of Turpentine, which lies conceal'd in the acid part of the Ethereal Spirit, and in the Oils which come forth firſt of all, contribute very much to the vertues which are attributed to them, the principal whereof are to open the paſſages of the Urine, to temper the heat thereof, to prevent the breeding of the Stone, and to ſtop Conorrhea's. It is alſo very much commended in all diſeaſes of the Breaſt; in thoſe of the Stomach, Liver, and Spleen; as alſo to diſſolve inward Contuſions, which come by falls, and to heal wounds and internal Ulcers. Outwardly they are apply'd for the cure of Fiſtula's, Chops, and Ulcers of the Lips, Nipples, and Fundament, as alſo of all ſorts of wounds, particularly of the Nerves, and to cleanſe and heal Ulcers, as well old as new, diſſolve Contuſions, aſſwage pains, and diſſolve ſwellings. It is commended alſo againſt deafneſs, by putting ſome drops into the Ears.

CHAP.

CHAP. XLIII.

Of the Diſtillation of Maſtich.

SOme there are that would perſwade you to mingle with Maſtich equal parts of the powder of Flints, together with a little Salt, and the help of a Cornute, with a gradual fire, to draw forth a white liquor, a yellow oil, and at laſt a red oil; which they would have you afterwards to rectifie in a little Cornute, and ſeparate the dark colour'd oil, that will remain at the bottom after rectification.

Others mingle with the Maſtich Bole Armoniack powder'd, and having made a paſte thereof with the Spirit of Wine, and then leaving it to macerate for fifteen days, diſtil it through a Cornute with a naked fire; and having drawn out a volatile Oil that will ſwim above the other liquor, and a heavy Oil faln to the bottom, rectifie it again upon new Bole Armoniack and new Salt.

Some there are that after they have fill'd two thirds of a Cornute with Maſtich in powder, and pour'd upon it as much Spirit of Salt, as is ſufficient to moiſten it well, diſtil it through a Cornute in a Bath of Sand, with a gradual fire well govern'd; and firſt they draw forth a little Flegm, afterwards a fair and clear Oil, mingl'd with the Spirit of Salt which ſhall be diſtill'd; after that a yellow one, and laſtly a red Oil. They alſo keep every one of theſe liquors apart, and rectifie them afterwards.

Some there are, that after they have drawn forth a tincture from the flowers of white Mullein, and St. Johnworts, with Spirit of Turpentine, leave it to digeſt fifteen days upon the Maſtich, altogether as heavy as the tincture, and having drawn forth that Spirit by the help of a Sand-fire, and cohobated the ſame two or three times upon the Maſtich, and at length chang'd the Recipient, they draw forth a yellow Oil, and in the laſt place a red; and then having calcin'd the mark or ſediment, extract a Salt from thence, which they mingle among the Oils.

Now you have the liberty to chooſe which of theſe diſtillations you like beſt, or to invent any other. For my part I think the beſt way is, to follow the ſame method for Maſtich as I have ſet down for Turpentine. For as much as if you govern your fire well, you ſhall have firſt a watry liquor, a little acid, accompanied with ſome particles of volatile Salt; after that yellow Oil, and laſtly a red one, which will have no need of being rectify'd, and which without all that trouble, and altering the qualities of the Maſtich by the mixture of ſtrange ſubſtances, will contain the moſt eſſential part of the Gum, and which will be moſt able to ſecond the deſign of your diſtillation.

The diſtill'd Oil of Maſtich is very much commended in weakneſs of the Stomach, and looſeneſs of the Inteſtines; to heal and conſolidate wounds and Ulcers as well of the Lungs as alſo of the Breaſt, and other inward parts of the body; to ſtop up the orifices of the Veins and Arteries, and to ſtay all loſſes of blood. It is given in proper liquors from four or five, to twelve or fifteen drops. It is alſo outwardly apply'd as well upon the Stomach as upon the belly, to ſecond internal remedies, as alſo in wounds of the Nerves, and all the other parts, to conſolidate and heal them; making uſe of it alſo by way of injection, among vulnerary decoctions, when the wounds are very deep. It is alſo made uſe of by way of unction, to fortifie the members, and in fractures and diſlocations of the bones.

Ordinary Roſin, Black Pitch, Olibanum, Gum Elemmi, Sandarach, Tacamahacca, Sarcocolle, Euphorbium, and the like, may be diſtill'd in the ſame manner as Turpentine and Maſtich.

CHAP.

CHAP. XLIV.

Of the diſtillation of Benjamin.

CONſidering the Roſſony ſubſtance of Benjamin, an Artiſt, would be apt to regulate his diſtillation according to that of other Roſſins; but its pleaſing ſcent, and the dilicacy and volatileneſs of its principal parts require particular cautions. For if you be not very exact, you will rather cauſe a deſtruction, then a legal preparation. They that would bring their buſineſs to paſs muſt proceed this way.

After you have put a pound of good Benjamin powdred, into a large Cornute of Glaſs, the neck whereof muſt be of the longeſt and largeſt ſize, pour upon it three pints of good Spirit of Wine, ſtirring them and incorporating them well together: Then having fitted and luted to it a Veſſel of Rencounter, keep the Cornute for four and twenty hours, with the neck upright, upon a Bakers oven, ſtirring the ſubſtances from time to time, to haſten the diſſolution of the Benjamin in the Spirit of Wine. After which, place the Cornute in the Sand-bath, fitting to its beak, inſtead of a Veſſel of Rencounter, a half Ball luted, with a wet Veſſel, and with a moderate fire diſtill firſt the Spirit of Wine, after which the flowers of Benjamin will riſe; but as ſoon as they appear, ſet a new Recipient, well dry'd, in the room of the former, and lute it ſlightly, that you may be able to draw out from time to time, the flowers that ſhall fall into it, as alſo thoſe which ſhall ſtop in the neck of the Cornute, putting up thoſe Flowers in a glaſs bottle well ſtopp'd, and then putting the Recipient into its place again. But then lute it up very exactly, when you ſhall perceive a thick liquor to diſtill from the Cornute, which will be the firſt oil of Benjamin, which you ſhall diſtill with the ſame fire: which if you continue, you ſhall have an acid liquor, and after that a yellow clear and odoriferous oil, and then the laſt oil greaſy and thick.

Theſe are the ſubſtances that are to be drawn out of Benjamin by diſtillation. Yet are they not many times deſir'd altogether at one time. For ſometimes it may be enough to have the Flowers or the tincture: they that deſire only the Flowers, may ſublimate them with little trouble, putting in two or three ounces of Benjamin powdred, into a long pot of potters earth, plac'd in a Sand-bath, and cover'd with a long Cornet of thick paper, the mouth whereof muſt be proportionable to the circumference of the pot. For having ty'd and faſten'd the bottom of the pot round about with pack-thread; the heat of a moderate fire, which you muſt kindle under the Sand-bath, will cauſe the light flowers of Benjamin to riſe, and ſtick to the inſide of the Cornute, white and ſlimy like Snow, and in long Cryſtal pointed drops; the ſcent whereof will be as ſweet and delectable, as the ſubſtance ſubtle and penetrating, and which may be truly call'd the true volatile ſulphur'd Salt of Benjamin.

Neither is the preparation of the tincture of Benjamin ſo very difficult, ſince you may find it in the diſſolution of Benjamin made in the Spirit of Wine, before diſtillation. For having pour'd out by inclination that diſſolution, and put it up in a glaſs bottle well ſtopp'd, you may call it the true tincture of Benjamin.

It may be ſaid, that this tincture contains all the good parts of the Benjamin, which the Spirit of Wine has diſſolv'd, and that the fæces that remain at the bottom, are only ſome ſtrange bodies which the Spirit of Wine could not diſſolve. We may be ſure alſo that the Spirit of Wine which riſes firſt in the diſtillation of Benjamin, fails not to carry off ſome particles of the volatile Salt of the ſame Benjamin, with which the ſulphury part has a particular congruity, as you may perceive by its good ſcent, and by the good effects which it produces, being tak'n inwardly, from half a dram to two drams in proper waters or decoctions, eſpecially when you would provoke ſweating; or make uſe of it for a Coſmetick inſtead of the Tincture, for it cleanſes, ſcowres, and penetrates better then that. You may alſo diſſolve in this Spirit, the Flowers, and buttery ſubſtance of Benjamin, which is much of the ſame nature with the Flowers, and draw from thence a tincture, more pure ſubtle, and which will work in a leſs quantity then the ſimple tincture of Benjamin, or the Spirit of Wine drawn out of it. There is no doubt alſo to be made, but that the Flowers of Benjamin are the moſt eſſential part of it; and that the prin-

principal vertues expected from them are, as well to ſubtillize bad humours, and to expell them through the pores of the Skin, as alſo to cut, loos'n and expell by the ordinary ways thoſe which are thick and viſcous, and particularly thoſe of the breaſt; giving theſe Flowers from three or four grains, to ten or twelve in convenient liquors, or mixing it with Trochick Looches, or other pectorall remedies. It is alſo mingl'd to good effect in odoriferous compoſitions. For which purpoſe the yellow oil is principally made uſe of, which comes forth after the acid part. As for the greaſy thick oil, that comes laſt of all, it is only fit to cleanſe and conſolidate old Ulcers. Nor would it be worth looking after, but that it follows the other ſubſtances, with little expence.

Storax may be diſtill'd in the ſame manner, as Benjamin.

CHAP. LXV.

Of the diſtillation of Myrrh.

Myrrh being a roſiny Gum, the watry parts whereof counterballance the oily, requires a method altogether particular for its diſtillation. Which that you may the better effect, having made choice of and beaten very ſmall a pound of that Roſiny Gum, and put it into a large glaſs Cornute, pour upon it four pints of good *Aqua vitæ*, ſtirring them together at that inſtant, and from time to time, during a maceration of twelve hours. After which having plac'd the Cornute in a Sand-bath, and fitted and luted a half ball to it, begin your diſtillation with a very ſoft fire at the beginning, encreaſing it by degrees, and eſpecially toward the end, the better to draw forth all the oily part of the Myrrh, ſetting aſide the Spirit that will aſcend firſt in diſtillation, and reluting afterwards the half Ball, to receive the reſt of the diſtillation. When all is thus diſtill'd, and the veſſels are cold, having ſeparated the ſuperfluous moiſture of the *Aqua Vitæ*, from the oily part of Myrrh, and incorporated the latter with the ſame weight of Vitriol calcin'd to whiteneſs, you ſhall rectify it into a little glaſs Cornute, in a Bath of Sand, over a very moderate fire, and you ſhall have an oil leſs thick, and much more pure than it was before; by reaſon that the vitriol retains the more thick and earthy parts. But becauſe the Vitriol fails not to impart ſome Acrimony to that oil, and that it is not ſo pure as may be deſir'd, mix it with its weight of the bone of an Oxe or Sheep calcin'd into powder, and four times as much Fountain water, and having put them together into a glaſs Alembick all of a piece, and having fitted and luted to its beak a little Recipient, in a Sand-bath over a moderate fire, you ſhall draw forth a yellow clear oil, and very proper for all its uſes, which are chiefly to kill the worms, reſiſt venome, and the putrefaction of humours, to open obſtructions of the Bowells, and particularly thoſe of the Matrix. It is giv'n from two or three drops, to ſeven or eight, incorporated with powdred Sugar, then diſſolv'd in its proper Liquors. It is alſo mingled in Pills, Opiates, and other Medicines.

There are ſome that think it enough to diſſolve Myrrh in *Aqua Vitæ* or in Spirit of Wine, and to draw forth an extract of that juice, after they have filter'd it.

I have ſet down the preparation of oil of Myrrh by a miſtake among the *Galenick* oils.

CHAP.

CHAP. XLVI.

Of the Diſtillation of Gum Ammoniack.

THe name of Ammoniack was given to this Gum from the temple of *Ammon*, where the ancient Heathen went to conſult the Oracle of *Jupiter*, as being the natural place where this Gum grew. The watry and viſcous ſubſtance whereof requires a particular method, not much unlike to that of Myrrh,

According to the opinion of ſome, you may very well mix Bole Armoniack, Brick, and powdred Flints with Gum Ammoniack, Galbanum Oponax and other watry Gums of the ſame nature, before you put them into the Cornute to make diſtillation. But though theſe Gums do eaſily ſwell in the Cornute, when the heat of the fire preſſes them more then they can endure, by which means they may probably get into the beak of the Cornute, and drop into the Recipient: nevertheleſs, they may be diſtill'd without any ſuch mixture, or without any ſuch fear of ill ſucceſs, provided you proportion the fire and veſſels to the quality of their ſubſtance.

They that have Furnaces and Veſſels proper whereon to place a Cornute, and to make diſtillation of the ingredients, by means of a hot air enclos'd, may make uſe thereof to good purpoſe upon this occaſion. But becauſe all men have not theſe conveniences, the ſame thing may be done by other means, as in *Balneo Mariæ* mix'd with Saw-duſt, the Cinder-bath or Sand-Bath, provided you govern your fire, and that your Cornute be big enough.

Put then a pound of Gum Ammoniack into a glaſs Cornute, large, deep, and fit to contain eight or ten times as much of the ſame Gum. Take which of the baths you pleaſe, and having plac'd the Cornute upon it, and fitted and luted a large Recipient to its beak, begin the diſtillation with a moderate fire till you ſee the work of the diſtillation very far advanc'd; and that all the danger of the ſwelling of the Gum be over, at which time you may by a little and little increaſe the fire, and at length make a violent fire to make the laſt oil of the Gum deſcend from the Cornute into the Recipient, concluding the diſtillation when the Recipient is abſolutely very clear. Then letting the Veſſels cool, and having unluted the Recipient, you ſhall find an acid Spirit containing the volatile Salt of the Gum, mix'd with much Flegm together with a thick ſtinking oil. Of all which ſubſtances you are to make a Rectification, pouring them upon a pound of bones calcin'd into powder and put into a glaſs Cucurbit, which is to be cover'd with a head well luted, and plac'd in a Sand-bath over a very moderate fire. For by this means the more groſs parts of the Oil, and the more watry parts of the firſt Diſtillation will remain at the bottom, while the pure and volatile ſubſtances riſe up to the head, and drop from thence into the Recipient. You may alſo make another Rectification upon new bones calcin'd into powder, of the whole Diſtillation, and at length ſeparate the diſtill'd volatile Oil from the ſpiritous part, wherein you will not fail to meet with the volatile Salt of the Gum, provided the Veſſels were carefully luted in the firſt diſtillations, and both the Rectifications.

The Spirit of Gum Ammoniack is very proper to open obſtructions of the Liver, Spleen, and all the bowels; for which reaſon it is with ſucceſs made uſe of in dropſies, Icterical diſtempers and Cachexies; as alſo for ſtoppage of the Urine. But particularly in diſeaſes of the matrix which proceed from the retention of the menſtruums, and the obſtruction of the Veſſels. It is giv'n, after general remedies, in the morning faſting from five or ſix to fifteen or twenty drops, in white wine or ſome other proper liquor continuing the uſe, as occaſion ſhall require. The oil is giv'n for the ſame purpoſes, from two drops to ſeven or eight, incorporated with powdred Sugar and then diſſolv'd in ſome proper Liquor. It is giv'n in all ſorts of Collicks, as well to be ſwallow'd down as in Cliſters, wherein it may be mix'd from eight or ten, to twenty or thirty drops. It is good alſo to facilitate the birth, and by anointing the noſtrels to ſuppreſs the evaporations of the Matrix, for which purpoſe you may uſe the oil which is not rectified.

CHAP.

CHAP. XLVII.

Of Chymical Tinctures of Vegetals.

CHymiſtry gives the name of Tincture to the extraction or ſeparation which is made of the colour of one or more mixt bodies, and the impreſſion which it makes in any liquor or proper menſtruum. This extraction or ſeparation of colour, contains with it a portion of the moſt pure ſubſtance of the mixt body, which having quitted its own proper body, has diſſolv'd and united it ſelf to the menſtruum, and has imparted to it its colour and its vertues. Tinctures of Vegetals are very common in *Galenick* Pharmacy. But they are never prepar'd but juſt when they are to be us'd. Or if you would keep them any time, fill them into Bottles fill'd up with a little Oil, to prevent the air from getting in. But the end of Chymical Pharmacy being to make preparations more pure and durable, then thoſe I have ſpoken of, makes uſe of menſtruums leſs ſubject to corruption, and makes choice of them in ſuch ſort, that they may have ſome correſpondence with the ſubſtance out of which you would draw the Tincture; and that ſhe may be able equally to preſerve the good parts and qualities as well of the menſtruums as of the mixt bodies whence the tincture is to be drawn. Nevertheleſs it ſometimes ſuffices to draw out the Tincture of certain Herbs or Flowers with their proper Waters diſtill'd, adding ſome ſmall quantity of the Spirit of Sulphur or Vitriol, to aſſiſt the penetration of thoſe waters. But then you muſt diſſolve a reaſonable proportion of Sugar candy'd, or other very fine Sugar, into theſe filtred tinctures, to preſerve them for ſome time in Bottles well ſtopp'd. But the Spirit of Wine is to be look'd upon, not only as the moſt uſual menſtruum, for the extraction of the Tincture of the moſt part of Vegetals, and particularly of thoſe whoſe moiſture is not very much, but as the moſt analogous and moſt proper to receive and cheriſh within it ſelf, their moſt pure and moſt eſſential parts; provided you take care, that nothing be diſſipated during maceration; and to keep theſe Tinctures in Bottles well ſtopp'd.

For example, put what quantity you pleaſe of the cleans'd tops of Wormwood, into a Matras or Cucurbit, with a ſtreight neck; then pouring upon it good Spirit of Wine, ſome three or four fingers above the Wormwood, cover the Matras or the Cucurbit with a ſmall Veſſel of Rencounter exactly well luted; and having let them macerate for ſeven or eight days over a Bakers Oven, or in ſome place moderately hot, ſtrain and preſs the ingredients, and ſeparate the greeniſh Tincture, containing in it the moſt pure and moſt eſſential parts of the Wormwood; which may be filter'd and kept in a double Glaſs Bottle well ſtopp'd, to be given, as occaſion ſerves, from one ſcruple to two drams, in Wine or in any other liquor, for diſeaſes of the Stomach, Liver, and Matrix.

The ſame method may be us'd to draw forth the Tinctures of ſeveral Woods, Barks, Roots, Gums, Berries, and Aromatick Seeds. And alſo for thoſe of Saffron, and other Cordial and Cephalick Flowers, and certain Rinds of Fruits; giving them in the ſame doſes, and alſo very near for the ſame uſes as the Tincture of Wormwood, already ſpoken of.

In the ſame manner alſo are prepar'd ſeveral Cephalick, Cordial, Stomachical, Antiſcorbutick Tinctures, *&c.* compos'd of ſeveral parts of Vegetals, variouſly dos'd; in regard that Chymiſtry begins ſeveral of its preparations by Tinctures, as you ſhall find by the ſequel of theſe pages.

CHAP. XLVIII.

Of Elyxirs.

ELyxirs approach very near to the nature of Tinctures, from whence they borrow the principal of their compoſition. The opinions of Authors are various touching the Etymology of the word Elyxir. For ſome derive it from ἔλαιον and σύρω, comparing theſe medicines to an extraction of Oil, which they look upon as one of the moſt eſſential parts of mixt bodies. Others would have the word to come from the Verb ἀλέξω, by reaſon of the great benefit which is receiv'd by Elyxirs. Others derive it from the Arabick word *Aleckſiro,* which ſignifies an artificial Extraction of a certain Eſſence. But not to ſtay too long upon the word, I ſay, that Elyxirs are ſpiritous liquors, deſign'd for internal uſes, and containing the moſt pure ſubſtances of choice mixt bodies, made uſe of in their compoſition, and which is imparted to them by the means of infuſion and maceration. The Spirits drawn from Vegetals, or their ſpiritous waters, are uſually the ground of Elyxirs, and the menſtruums made uſe of to diſſolve and retain the true eſſence of the medicaments, which are admitted into their compoſition. Nevertheleſs the Spirit of Wine is the moſt convenient of all. For which reaſon it is more made uſe of then any other menſtruum; eſpecially when there is any occaſion to diſſolve and unite to the Elyxir, any oily or gummy ſubſtances, particularly thoſe of Aromaticks, which would remain with the ſediment after infuſion, had they not met with ſome analogus liquor, proper to unite with them. This hinders not, but that ſometimes ſpiritous waters leſs penetrating, may be mingl'd with this Spirit to take of its ſharpneſs, when it is charg'd with theſe ſubſtances, and to make the Elyxir fit to be taken inwardly when it is to be giv'n alone; ſometime alſo ſome little Sugar or ſome Syrrup may be added to it, to make it more pleaſing to the taſt. But there is no neceſſity of taking away the ſtrength of this Spirit, no more then of the Elyxir, when you have no deſign to give it alone; but that you keep it to give it in liquors proper to its uſe; and then the doſe of theſe Elyxirs is but from five or ſix drops to fifteen or twenty; whereas when the Spirits are weaken'd, you may give it to one or two ſpoonfuls at a time, adding to it ſpiritous waters, and ſweetning them either with Sugar or Syrrups.

For Example, prepare an Elyxir Camphir'd, by digeſting and diſſolving half an ounce of Camphire in four ounces of Spirit of Wine, either in *Balneo Mariæ,* or in a Bath of Aſhes; over which they muſt be ſet in a little Matras, cover'd with a Veſſel of Rencounter perfectly well luted; to which diſſolution is given the name of Elyxir, of which not above twenty drops at moſt are to be taken at a time, in Wine or ſome Cordial-water, to provoke ſweat, fortifie the heart, reſiſt the malignity and venomous quality of the air, to eaſe the Gout, and to be mainly ſerviceable in all diſeaſes of the brain. You may alſo put it into hollow teeth, dipp'd in Cotton, to appeaſe the tooth-ach.

There is an Elyxir of Citron to be prepar'd after the following method. Put into a Matras half a pound of Rind of a Citron, pared and ſhred very ſmall; and having pour'd upon it two pints of good Spirit of Wine, and half a pint of clarify'd juice of Citron, cover the Matras with a ſmall Veſſel of Rencounter carefully luted; and having kept it for four and twenty hours over a Bakers Oven, and ſtrain'd and gently ſqueez'd the whole, mingle therewith the weight of the diſtill'd water of Vipergraſs, and a pound and a half of fine powder'd Sugar, then having paſs'd the whole through a ſheet of Cap-paper, you may add if you pleaſe, a dram of the tincture of Musk and Ambergreeſe, which will prove a very delightful Cordial Elyxir, which may be taken from half a ſpoonful to two whole ſpoonfuls, to comfort and ſtrengthen and fortifie all the noble parts.

In which preparation, I cannot but approve the opinion of *Schroderus* and *Rolfincius,* concerning the juice of Citron, which they have put into their Elyxir, to give it an acidity, as pleaſing to the taſt as proper to temper the heat, and take off the ſharpneſs of the Spirit of Wine; contrary to the opinion of *Frederick Hoffman,* who in contradiction to the writings of *Schoder* upon this occaſion, whoſe Book he had under-

undertaken to comment upon, and *was wont to ſwear to the truth of his Maſters words*; yet would take the juice of Citron quite away from this Elyxir, deſign'd for diſtempers of the heart, and to reſiſt the venom of the peſtilence, without giving any reaſon for his ſo doing. But the Doctor forgot that he made the juice of Citron the only Alexipharmacon againſt the poiſon of the Viper, to exclude it ſo idly out of this Elyxir.

CHAP. XLIX.

Of Elyxir Proprietatis.

THE reputation of this Elyxir is too great, and its effects too well known, not to merit here a particular Chapter. All Authors attribute to *Paracelſus* the invention of this medicine; but the imperfect knowledg which he has given of it, and above all things his ſilence touching the menſtruum which is to be made uſe of, have very much perplex'd thoſe that have come after him, and have been the occaſion of the diverſity of deſcriptions which we find up and down in ſo many Authors. Nevertheleſs that which *Crollius* hath ſet forth, has been the beſt receiv'd. Though there may be great reaſon to diſapprove the Spirit of Sulphur, which he hath put in to draw out the Tincture of the Myrrh, the Aloes, and Saffron, ſince that Spirit is enough to burn the moſt pure ſubſtance of the Drugs, and by that means to diſappoint the Artiſt and Patient of all the good effects which they expect from this Elyxir.

And therefore I ſee as little reaſon, that for the purpoſes aforeſaid, the liquors drawn from the diſſolution of certain Salts of Vegetals or Minerals, call'd by the name of *Alkaheſt*, ſhould be more advantageouſly made uſe of; becauſe that Myrrh, Aloes, and Saffron, are not proof againſt the natural acrimony of theſe Salts, which would deſtroy and conſume their moſt pure and moſt eſſential parts. And therefore my opinion is, that upon this occaſion, as in all other of the ſame nature, we muſt be careful to find out menſtruums which agree in ſimilitude of ſubſtance, with the matters whoſe moſt eſſential part you endeavour to ſeparate. And for as much as Myrrh, Aloes, and Saffron, are compos'd of watry parts mixt with Oily, there can be no faileur in their extraction, if congruous menſtruums be made uſe of, ſuch as I have been wont to uſe for this preparation.

Having put into a glaſs Cucurbit with a ſtreight neck, equal parts of choice Myrrh, Aloes, Succotrin, and pure Saffron, finely beaten, and having ſlightly ſprinkl'd them with ſome ſmall quantity of Spirit of Sulphur, temper'd and qualifi'd with equal parts of Spirit of Wine, pour upon them the diſtill'd water of Balm, about three fingers above the ſubſtances; then having well ſtirr'd the matters, and cover'd the Cucurbit with a little Veſſel of Rencounter carefully luted, let them macerate for fifteen days over a bakers Oven, ſtirring them from time to time, the better to diſſolve the watry ſubſtance of the drugs in the Liquor, that is to ſay, that which will diſſolve in the aqueous ſubſtance. Then having unluted the Veſſels, pour'd out by inclination, filter'd and ſet apart the tinctur'd liquor that ſwims above the powders, put in the room thereof about a third part more of Spirit of Wine then you put before of Balm-water; and having carefully luted the Veſſels, continu'd maceration a-new for two months, and ſtirr'd the ingredients from time to time as before, filter the liquor alſo, wherein you ſhall find the ſtrength and moſt eſſential part of the drugs; upon which you may again pour new Spirit of Wine, and reiterate maceration; but this laſt reſidence will not be worth the trouble. Then mix this tincture with the firſt which was drawn with the Balm-water, and having put them into a Cucurbit cover'd with its head well luted, and plac'd in a Bath of Aſhes, draw forth with a very moderate fire about two thirds of the liquor, then letting the Veſſels and the ingredients cool, pour into a double glaſs Bottle that which remains in the Cucurbit, and having ſtop'd the Bottle, keep it for your uſe.

But to gratifie the inventions of the moſt part of Authors, who will have the Spirit of Sulphur to make up one part of the compoſition of this Elyxir; you may

pour upon a a certain quantity of this liquid concenter'd together, the third or fourth part of its weight of Spirit of Sulphur, and let them macerate together for two months over a Bakers oven, in a Matraſs cover'd with a veſſel of Rencounter exactly well luted. During which time the acid of the Spirit of Sulphur, will mortify the moſt part of the bitterneſs of the Aloes and Myrrh, and uniting it ſelf with this concenter'd liquor, will bring the Elixer to perfection, and make it proper for the uſes for which Authors recommend it, and particularly *Crollius*, who will have this Elixer to be the Balſom of the Ancients, and to contain all the vertues of natural Balſom, neceſſary for the preſervation of the bodies, eſpecially of old men; he commends it as a wonderfull remedy againſt all diſeaſes of the Lungs, againſt contagious diſtempers and peſtilent Airs, to ſtrengthen and aſſwage the pains of the ſtomach and head, to cure vertigo's, ſtrengthen the memory, break the ſtone in the Reins, to be a preſervative from the Gout and Palſy, to cure quartain Agues, to preſerve Youth, and lengthen out old age, to cure and conſolidate wounds and inward Ulcers; and in a word, by an occult quality to overcome all diſeaſes, as well hot as cold. The doſe is from five or ſix to twelve or fifteen drops in wine, or in any other proper liquor.

But for as much as this Elixir prepar'd with the Spirit of Sulphur, is not proper for all ſorts of perſons, and particularly for thoſe whoſe diſtempers are to be imputed to the exceſs of Acids, which the Spirit of Sulphur may encreaſe; you may do well to keep one part of the concenter'd Tincture apart, to mingle with it upon occaſion, the third or fourth part of this weight of the volatile Salt of Harts-horn well rectified, or ſome other Spirit of the ſame nature, which may qualify the ſharpneſs of the acids by uniting with them; and divert the bad effects of the Sulphur, as I have ſeen practis'd by judicious Phyſitians, well skill'd in the grounds of diſeaſes.

CHAP. L.

Of Extracts of Vegetables.

THe name of Extracts is giv'n to the pureſt part of Vegetables, ſeparated from the groſſer, and diſſolv'd in ſome proper menſtruum by the means of digeſtion; and afterwards reduc'd to a thick conſiſtence by diſtillation, or by evaporation of the moiſture of the Menſtruum. Generally Extracts are begun by the Tincture of the ſubſtances; the Tincture is converted into an eſſence; which is a conſiſtence between a Tincture and an Extract; and at length the Eſſence is converted into an Extract. Extracts may be alſo made of diverſe juices, by evaporating the ſuperfluous moiſture, particularly of the juices of ſeveral fruits, berries and herbs. But more Extracts are prepar'd by pouring the menſtruums upon the parts of the Vegetals, whence you intend to draw them, then by making uſe of their juice. Many times alſo ſtrange liquors muſt be made uſe of to extract and ſeparate the more pure ſubſtance from ſeveral thick juices, which carry the reſemblance of an Extract, as Opium, Aloes, Scammony. *&c.*

Some there are who have written againſt the preparation of Extracts, in regard of the danger which they ſay there is of looſing the moſt eſſential part of the matters. Which opinion may hold in reference to certain Aromaticks, the thin and volatile parts whereof cannot endure the fire; and therefore diſſipate in the evaporation of the liquor; or elſe aſcend in diſtillation, when your deſign is to ſave the fix'd parts. But all the parts of Vegetalls are not ſubject to theſe diſſipations; beſides that many times there may be no occaſion to look after any but the fix'd parts. Now for as much as the ſeparation of the pure parts from the impure is very neceſſary in all Extracts; that this cannot be done, without diſſolving them in ſome proper menſtruum, and that the uſe of ſeveral Extracts is as convenient for ſick people, as fit to ſecond the intention of the Phyſitians, we ſhould do them injuſtice not to let them have their place among Chymical preparations.

Now the better to ſucceed in the preparation of Extracts, it requires a diligent ſtudy to know the nature of the ſubſtances of the parts of Vegetalls which are intended

tended for extraction; that there may be a proper menſtruum made uſe of, which may have ſome analogy and correſpondence with their pure parts; and by diſſolving them may unite them to it, and ſeparate them from the groſſer parts. In reference to which I am not of their opinion, who rejecting upon this occaſion, the Spirit of Wine, make uſe only of the Spirit of dew, or diſtill'd rain-water for a Menſtruum in all ſorts of Extracts. Becauſe it is impoſſible for them to diſſolve all ſorts of ſubſtances, eſpecially the Gummy; for which purpoſe Chymiſtry can uſe nothing ſo proper as the Spirit of Wine. Not but that Spirit of dew or diſtill'd rain-water may be uſeful in other diſſolutions of pure parts, eſpecially of ſeveral Flowers, and ſome herbs, whoſe principal parts are watry.

Theſe ſorts of Menſtruums may be made uſe of for the preparation of the Extract of the Flowers of Saffron, Gillowflowers, little Centaury, Carduus, Worm-wood, and ſeveral Aromatick Gums, though Spirit of Wine is more proper in all thoſe extractions, making uſe of a very moderate fire, to recover the Spirit, and ſhutting the Spirit up cloſe, for fear of looſing any of the good properties which it may have carry'd along with it; or to make uſe of, upon occaſion, inſtead of ſome preparation of the ſame nature.

CHAP. LI.

Of the Extract of Opium.

OPium being a juice drain'd from the heads of Poppies cut when they begin to grow ripe, and condens'd by the beams of the Sun, in *Greece* where they grow in great abundance, was by the Country call'd Ὄπος, or Ὄπιον, for its excellency; as being a juice very much to be valued, and which produces greater effects and in leſs quantity, then any juice drawn from Vegetals. But the difficulty of getting Opium drain'd of it ſelf without any mixture, and the foulneſs of that which is brought to us, which to ſay truly, is but a *Meconium*, or the juice of Poppy thickn'd, have conſtrain'd the Chymiſts to find out ways to purify it. So that when we come to the preparation of the Extract of Opium, there are three different ſubſtances to be taken notice of it, wherein are conceal'd the five that Opium has common with ſeveral other parts of Vegetals. The difference of the two firſt, forces me to make uſe of two ſeveral Menſtruums, and to proportion each of the two to the ſubſtance which in is to diſſolve.

Having cut very ſmall and put into a Matraſs, half a pound of the beſt Opium, which is to be had, and pour'd upon it two pints of rain or river water, ſtirr'd the ingredients, and ſtopp'd up the Matraſs, keep it ten or twelve hours in a Sand-bath, over a moderate fire, ſtirring or ſhaking it every foot. Then increaſing the fire of the Bath, to the end the Ingredients may boil a while, pour out by inclination upon a filter of Cap-paper the Liquor that ſwims uppermoſt; and having filter'd it, ſet it aſide. After which having pour'd out two pints of more water upon the ſediment, ſtopp'd up the Matraſs, and repeated the ſame ſhakings, maceration, ebullition & filtration of the liquor that ſwims uppermoſt, and which will contain the reſt of the watry Spiritous and Salt part of the Opium; and mix'd this liquor with the former; pour upon the ſediment in the ſame Matraſs, two pints of good Spirit of Wine, which will preſently colour it ſelf, when it begins to diſſolve the Gummy ſubſtance of the Opium, which is conſentaneous to it, and which could not be diſſolv'd by the water. Then having cover'd the Matraſs with a little veſſel of Rencounter carefully luted, and having continu'd the aceration and ſtirring of he Ingredient as before, but over a much ſlacker fire, filter the liquor, and put it up as before. After that having pour'd upon the lees, a pint of new Spirit of Wine, and having done in all things as before, you ſhall find the Gummy ſubſtance of the Opium altogether diſſolv'd in the Spirit of Wine, while the terreſtrial part of the Opium remains upon the Filter, or at the bottom of the *Matraſs*. And though it be impoſſible abſolutely to deſpoil it of its other ſubſtances, yet there will remain ſo little, that it may be well accompted a *Caput Mortuum*.

Then pour the firſt and ſecond Tinctures of Opium both together, into a glaſs Cu-

Cucurbit, and having plac'd it in a Sand-bath, and cover'd it with its head perfectly well luted, and fitted a ſmall recipient to its beak, luted in the ſame manner, with a moderate fire draw forth the Spirit of Wine; which may ſerve for new extractions of the Gummy parts of Opium, or elſe to aſſwage the tooth ache. Then having unluted the head, and pour'd into a little Pipkin, well glaz'd, all the Liquor which remain'd in the Cucurbit, evaporate by degrees the ſuperfluous moiſture over the ſame Sand fire, and bring the whole maſs to the conſiſtence of an Extract, which will contain all the pure parts which the Opium had, which conſiſt in a volatile Salt and Sulphury Spirit, in a part gummy oil, half volatile, and in a little other Salt, half fixed by the conjunction of ſome little Acid which the Opium contains; the whole being ſtill accompanied with ſome ſmall quantity of Flegm. This in my judgment is the pureſt and beſt extraction of Opium that is yet invented. In the preparation the uſe whereof I dare promiſe good ſucceſs, by the innumerable trials which I have made of it for a long time, and which I make every day.

Nor is it to be wondred at, that this long experience of mine did not move me before to contradict, as now I do that torrefaction, which ſeveral Authors, very famous men, have practiſed upon Opium, to conſume the greateſt part of its Sulphur, which they believ'd to be dangerous, but which indeed is one of the beſt and moſt effectual parts of the Opium; not conſidering that by that torrefaction the greateſt part of the volatile Salt would be conſum'd with the Sulphur, and that by that means the other ſubſtances would looſe the greateſt part of their activity. For though we may ſafely ſay, that the oil and Sulphury ſubſtances reſiſt the penetration of the Acids, nevertheleſs we are to believe that the Acids naturally uniting themſelves to all ſorts of Salts, as well fix'd as volatile changes their nature and their action in fixing them, and that while we employ theſe acids in the diſſolution of Opium, we cannot but expect effects very different from thoſe which the Opium might produce, when it has undergone no ſuch like alteration.

The examination of the pure parts, which we ſeparate from the Opium, in drawing forth the Extract, gives us to underſtand that it would be a vain thing to ſearch for cold ſubſtances in Opium, or to attribute thoſe powerfull effects to them which Opium is capable of, though given in a ſmall quantity. Conſidering that it is not the property of cold ſubſtances to work, like Opium, by grains or half grains, nor to do that which cannot be rationally expected from ſubſtances not abſolutely hot. And though I know no modern Author ſo weak in judgment, as to accuſe Opium of coldneſs, nevertheleſs I will give you one remarkable experiment which I made upon my ſelf, about a year ſince, of which this is the Relation.

Diſcourſing in my ſhop one Summer day about eight a clock in the morning with a Phiſitian of *Provence*, upon the nature and effects of Opium, and being deſirous to demonſtrate to him that the ſleepy quality, which had been till that time attributed to Opium, was not ſuch as it was imagin'd to be, I took a good piece of Opium and cut in the middle before him, taking out of the middle a little piece of the pureſt, weighing twelve grains good weight, I made a pill of it, and ſwallow'd it before him, notwithſtanding, all his perſwaſions to the contrary. After that I fell to my buſineſs in the ſhop, as I us'd to do, and as if I had taken no ſuch thing till dinner time, at what time I ſate down, and having eaten my ordinary meal, I found my ſelf ſatisfy'd, and return'd again to my buſineſs in the ſhop till two a clock in the afternoon; and then going up to my Chamber I lay'd my ſelf down upon Chaires, intending to have gone to ſleep: but though I found no inclination at all to ſleep; yet becauſe I lay at eaſe, I lay ſo till ſix or ſeven a clock in the evening. At which time, being call'd up about buſineſs, I roſe, but perceiving my ſelf doz'd with the vapors of the Opium, when I was got upon my feet, I laid down again upon the Chaires till nine a Clock. At which time not having any ſtomach, I reſolve'd to eat no ſupper, the better to underſtand the extent of the effects of the Opium. Thereupon I went to bed, and lay that night in a very pleaſing repoſe, but that which is moſt remarkable, I had no deſire all this while to cloſe my eyes; and that I lay all the while awake, as if I had been up. True it is, that all the time that I lay, as well in my bed, as upon the Chaires, I felt from time to time an itching over every part of my body; which was a certain ſign of the Diaphoretick faculty of the Opium; and which perhaps might contribute ſomething to keep me awake, though I felt no trouble at all therein. Riſing the next morning at my accuſtom'd hour, I felt the vapours no more, but all the day long I felt the ſame itching as before, though my ſtomach were very good. The next might I ſlept as did before

I took the Opium; not being disturb'd by any kind of itching; upon the morrow morning, which was the third day, my face was observ'd to be swell'd; without any redness, or any pain; however I went all about the City where I had business, though the swelling did not fall before noon.

I could never have spoken so confidently of the effects of Opium, had I not try'd it upon my self twice, taking once before the weight of six grains, and this time twelve. For finding my self to be of a good constitution, and one that was not troubl'd with any predominating humour, which might alter the natural effects of the Opium, I do hence conclude that there ought to be more credit given to what I protest to be really true, as to what I have try'd upon my self, then to experiments made upon six persons, whose different distempers and constitutions, cannot but very much alter the effects of the Opium. Besides that it is not usual to give it them into so great a dose, as to whom I never give but from half a grain to one or two. And if you observe it, you shall seldome find that they cause sick people to sleep to the least excess, how fearful so ever we be of its sleepy quality.

The result of all the Reflexions which I have made at several times upon my experiment, especially upon those which I have made in the exhibition of Opium, is, that the Diaphoretick quality which I sensibly perceiv'd to be in it, is an effect of its volatile Salt, which being united and concenter'd with its Sulphur, and forcing it to follow and assist it's motions, drives toward the pores of the skin the fuliginous and corroding humours, which break the sleep, and cause pains. But though we cannot expect to see such visible effects of Opium, giv'n from one to two Grains, as if you give it in twelve, yet we may judge of the nature of it, by what it does in a great dose.

As to the remarkable effects which it produces every day giv'n but one grain or half a grain at a time, especially when it is giv'n for the ease of pains, or to stay defluxions, we cannot rationally attribute them to any thing else but to the volatile Salt and Sulphur, which the same Salt has united to its self. There is also great reason to believe, that from the close union of this salt with the sulphur, and their just proportion, there arises a certain secret ferment, able to augment it self, by uniting to it the Homogeneous particles which it meets with in the stomack, and to judg that the said ferment, by their conjunction, produces those effects which it could not do without it.

As to what concerns the Narcotick Vapours which may arise from Opium, and which must be attributed to its Sulphur, they cannot be very considerable in regard we give so small a quantity; which we cannot imagine can be able to stop up the passages of the Spirits, nor of the humours which distill down upon the parts. But we are rather to believe, that the ease giv'n to pains, and the stopping of defluxions proceeds from the just proportion of the Salt and Sulphur of Opium, and from the secret ferment which they contain; and that being united with the homogeneus particles which they have met, and having subdued and mortified those that were the cause of the pain, and particularly the acids, they produce their great effects, though giv'n in so small a quantity; and that though this Salt and this Sulphur assisted by their natural ferment, cannot expell the humors so far as they might, if giv'n in a larger dose, yet they may stop and prevent their effects, as we see every day. We must believe also that this Salt and this Sulphur thus united, would not quit their operation, had they been given in a greater dose, though we are always to proportion it to the temper and condition of the Patient. And that so much the rather because experience has taught me, that a person whom I have mention'd in my treatise of Treacle, who had accustom'd himself by degrees to take the Extract of Opium, and to augment the dose to half a dram, and to take it three times a week, was wont every twenty hours after he had taken it, duly to have the benefit of nature, and to go nine or ten times to the stool; which is a manifest effect of the force of the union of the volatile Salt with the Sulphur, and of their natural ferment, which having united to its self and finding it self fortify'd with the homogeneous Salt particles which it has met, produces at length those effects, which might seem to be above its strength, by means of those particles uniting to its self and fixing the acids. And all this while there happ'ns no extraordinary sleep either from a greater or or lesser dose, unless it be occasion'd by any ill disposition of nature, as to Lethergies; which causes the credulous to impute those bad effects to Opium, of which it is altogether innocent.

CHAP.

CHAP. LII.

Of Laudanum.

THE name of *Laudanum* is given to ſeveral preparations, or compoſitions, which have Opium for their foundation, the uſe whereof is too common to make a particular Chapter of them. The moſt part of the Ancients, and alſo ſome of the Moderns, have put in practiſe the torrefaction of Opium, and make uſe of Acids to draw forth out of it an Extract for the preparation of Laudanum. They have alſo added ſeveral tinctures of Aromaticks, and ſome Cordial-powders, of Magiſteries, of pretious Stones, diſtill'd Oils, ſeveral Cordial or Cephalick Extracts, certain volatile Salts, and divers other preparations of Animals or Minerals. But not to repeat what I have ſaid in the foregoing Chapter againſt the torrefaction of Opium, and uſe of powerful Acids, I think that the preparation of Opium, which I have ſet down, is that which ought not to give place to any Laudanum whatſoever; and that the plain preparation of Opium there taught, is beyond all the artifices they can uſe to Laudanum; conſidering that we may uſe whatever other remedies are convenient.

But to allow ſomething to the name and laudable effects which we may expect from Laudanum, I will here inſert that deſcription which to me ſeems the moſt reaſonable that I have met with in Authors, which I took out of the Epiſtle of *Monſieur Joel Langelot*, a learned man, and Phyſitian to the Duke of *Holtſatia*, addreſs'd to the Gentlemen of the *German Society*, imprinted at *Hamburgh*, in the year 1672. There he directs you to put into a glaſs Cucurbit, low enough, a pound of good Opium cut very ſmall; and after you have pour'd upon it ten pints of the juice newly drawn from very ripe Quinces, and added thereto an ounce of Sal Tartar well dry'd, to expoſe the Cucurbit to a ſoft heat for a day or two, or till you perceive little bubbles appear above the Liquor, which is a ſign that the ingredients are ready to ferment. He directs you then to add four ounces of powdr'd Sugar, and to make uſe of a moderate heat to advance fermentation; by means whereof the Opium muſt riſe and totally diſſolve; adviſing withall to keep at a diſtance from the vapours that will aſcend. He ſays alſo, that then the impure volatile and ſcummy part ſwimming at the top of the liquor, the earthy part will ſtay at the bottom, and that the pure tranſparent liquor, as red as a Ruby, will keep in the middle; that you muſt ſeparate it, filter it, and thicken it with a ſlack heat, to the conſiſtency of an Extract; that then you muſt diſſolve this Extract in the Spirit of Wine; and that having filter'd it, and digeſted it for a months time, to rip'n it, and bring to perfection, as he terms it, in that cœleſtial fire, the crudities of the Opium, you muſt thick'n the whole again to the conſiſtency of an Extract, of which he promiſes wonderful effects upon all occaſions, where Laudanum is to be us'd; giving at a time not above a quarter, or at moſt but half a grain.

This preparation of Laudanum deſerves to be approv'd, becauſe there is nothing in it capable to vitiate the nature of the Opium. For beſides that there is not in the juice of ripe Quinces any thing of powerful acid, there is but as much as needs to aſſiſt fermentation. And that which is there conceal'd, is not only counterbalanc'd by the Sal Tartar, and ſucceſſively by the Sugar, but alſo wholly qualify'd by the volatile Salt of the Spirit of Wine, being added thereto with diſcretion. As for the vapours that riſe from the Opium during fermentation, it is impoſſible to make them good, for beſides their bad ſmell, they are not to be endur'd no more then thoſe of the Spirit of Wine, when it ferments in the Veſſel. As to the ſmall doſe of Laudanum, it muſt be imputed to the union and cloſe binding up of the parts of the Opium by fermentation, and their laſt compoſition in reducing them to an Extract.

Neither in the one nor the other Pharmacy is there any remedy more proper for ſo great a number of diſeaſes, nor of which the uſe is of greater extent, then that of Laudanum, or the Extract of Opium, which I have deſcrib'd in the foregoing Chapter. For it procures reſt, expelling the ſharpneſs of the humours that interrupt it, the motion whereof it ſtops. It fortifies Nature and the parts, whereas other

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Narcoticks do the contrary. It corroborates all the bowels, cheriſhes the natural heat, reſtores the retentive faculty being debilitated, ſtops all loſſes of blood in men or women, as alſo exceſſive menſtruums, all ſorts of Fluxes of the belly, and other thin and corroding defluxions either upon the Eyes, the Teeth, the Ears, the Throat, the Lungs, the Stomach, and all other external or internal parts. It aſſwages all pains of the head that proceed from attenuated humours, tak'n inwardly or apply'd to the Forehead and Temples. It diſſipates the wind and noiſes of the Ears. It eaſes the Tooth-ach. It ſtops vomiting after evacuation, as alſo the violent purgations and fermentations of humours. It gives eaſe to windy and cholerick Cholicks, and all ſorts of griping pains of men or women, as well ſwallow'd as mix'd in Clyſters. It is a ſoveraign remedy in Dyſenteries, as well to hinder the fermentation of the humours, as to remove their acrimony, after neceſſary purgations. It is made uſe of alſo with good ſucceſs in all diſeaſes of the Reins and Bladder, to aſſwage the pains thereof, as of Gonorrhæa's, and to ſtrengthen the Spermatick Veſſels. It aſſwages the pains of all ſorts of Gouts and Rheumatiſms, thoſe of Ulcers and burns, and in general all ſorts of pains that can happen in any part, to any perſon, of whatever age or ſex, at any time, or whatever the cauſe may be, eſpecially after the uſe of general remedies, without which the uſe of Laudanum would do but little good.

CHAP. LIII.

Of the Extract of Aloes.

IN Shops the thick juice of the Plant of Aloes is taken for Aloes it ſelf, which is uſually brought us out of *Arabia* or *Egypt*, dry'd and wrapt up in skins, and of which we ſee three ſorts. The leaſt of which is call'd by the name of *Aloes Caballin*, or Horſe-Aloes; by reaſon of its foulneſs; for which reaſon it is only us'd in medicines for Horſes; whereas the middle Aloes being a little more clean, and in colour reſembling the Liver, carries the name of *Heppatick*, and the pureſt and beſt retains the name of *Succotrin*, or *Socotrin*, as being gather'd in great abundance in the Iſland of *Socotra*. This is the only Aloes to be made choice of to make the Extract, and to be us'd upon all occaſions where Aloes is preſcrib'd; the chief marks to know the goodneſs whereof, are to be of a purple colour and ſhining tranſparency, when it is broken in pieces, and to be of a grateful ſcent.

In Aloes there are two principal ſubſtances, of which the one being watry and ſalt, is eaſily diſſolv'd in liquors conformable to its nature; whereas the other, which is gummy, is never ſo properly ſteep'd in any thing, as in the Spirit of Wine. You may diſſolve the firſt in fair water, like Opium; but uſually thoſe liquors are made uſe of which are moſt proper to ſecond its vertues, or at leaſt to fortifie the ſtomach and bowels, during its operation; ſuch are the clarifi'd juices of pale Roſes, Violets, Succory, Bugloſs, Burrage, Fumitory, *&c.* The method to be obſerv'd both in the one and the other Extraction, is ſo like to that which I have directed for that of Opium, that it would be ſuperfluous to give new directions. I will only ſay this, that the two moſt common Extracts of Aloes, which are prepar'd in Shops, are made the one with the juice of pale or red Roſes, the other with Violets, under the names of *Aloes Roſatum*, and *Aloes Violatum*, in both which you are at length equally oblig'd to make uſe of Spirit of Wine, if you intend to put into the Extract the gummy part of the Aloes, though ſome are contented with the watry and ſalt part, reſerving the gummy for vulnerary Balſoms, which is the moſt advantageous uſe that can be made of that part.

The two Extracts of Aloes, which I have mentioned, are very near the ſame in reference to their vertues and uſes. But that which is made with the juice of Roſes is ſomewhat more purgative then that which is made with the juice of Violets. And here I will take occaſion to make the compoſition of *Pilula Angelicæ*, which the Apothecaries of *Frankfort* have ſold for a long time under the name of *Frankfort* Pills; and keep as a great ſecret, for fear others ſhould make advantage of them.

Take for Example a pound of good Aloes powder'd, and having diſſolv'd in *Balneo Mariæ*, or in a Bath of Aſhes or Sand, the watry part in juice of Violets, newly preſs'd forth; and the gummy in the Spirit of Wine, and filter'd and mix'd the two diſſolutious into a glaz'd earthen Pipkin, evaporate the ſuperfluous humidity over a very ſoft fire, till it become as thick as Honey; then adding the double of its weight of new juice of Violets, evaporate the moiſture with the ſame heat, till the maſs be ſo thick that you may make it into Pills, which will operate the ſame effects, as thoſe whoſe reputation is ſo great, under the name of *Frankfort* Pills; whoſe chief-eſt vertue conſiſts in the qualification which the juice of Violets gives to the acrimony of the Aloes; which is the reaſon that moſt Authors forbid the uſe of it to perſons of either Sex, who are ſubject to the Haimorrhoids, ſpitting blood, bleeding at noſe, or any other Flux of Blood whatſoever, or to thoſe who are troubled with ulcer'd lungs, or whoſe lungs are waſted with hectick Fevers; as alſo to women with child, for fear of opening the Veſſels; and other accidents which the Aloes might produce. Whereas, ſetting aſide theſe precautions, they recommend the Extract of Aloes for the preſervatiou of health, to cleanſe the ſtomach of corrupt humours, which lye in the Tunicles, to open obſtructions of the Liver, Spleen, and all the Bowels, expelling the filth thereof at the ſame time, and fortifying their parts.

Some, beſides the juice of Violets add to their Aloes the juices of Roſes, Fumitory, Burrage, and Bugloſs. Others make an augmentation of the juices of Carduus, Cammomel, Germander, and Speedwell; imagining that thoſe juices were ſome part of the ingredients of the *Frankfort* Compoſition. But though the moſt part of theſe juices may be made uſe of in diſeaſes of the ſtomach, ſpleen, and liver; beſides the unneceſſary addition they would make to the weight and maſs of thoſe Pills, they could not all together, ſo far nor ſo effectually qualifie the acrimony of the Aloes as the juice of Violets, while they chang'd the true receipt of the Pills.

Theſe Pills are uſually made up very ſmall, not to weigh above half a grain apiece. They are taken in a Wafer or roſted Apple, or in ſome ſweet-meat, from five or ſix to fifteen or twenty grains, juſt going to dinner, or rather to ſupper; for in regard they do not work till ten or twelve hours after they are taken, the Patient has time enough between to ſleep.

CHAP. LIV.

Of the Extract of Rhubarb *and* Senna.

THE greateſt part of the pureſt ſubſtance of Rhubarb, being watry and ſalt, as alſo that of Senna, watry menſtruums muſt be made uſe of for their extraction. But after you have extracted that ſubſtance, you muſt make uſe of the Spirit of Wine to diſſolve the gummy ſubſtance which remains in the ſediment. To which purpoſe having bruis'd or cut very ſmall a pound of good Rhubarb, and put it into a glaſs Cucurbit, pour upon it four pints of the diſtill'd water of Succory or Endive; then having plac'd the Cucurbit in a Bath of Sand, and kept a very moderate fire under the Bath for ten or twelve hours, ſtrain and ſqueeze out the tincture forcibly. Then returning the ſediment into the Cucurbit, and having pour'd upon it two pints of new Succory-water, renew the maceration in the ſame Bath, and with the ſame heat for ſix hours; then having ſtrain'd and preſs'd out the ſubſtances, and return'd the ſediment again into the Cucurbit, pour upon it a pint of good Spirit of Wine; and having cover'd it with a Veſſel of Rencounter carefully luted, put it into the ſame Bath, and renew'd maceration for ſix hours, ſtrain the whole and preſs it out very hard. Then having mix'd this Tincture with the former, and paſs'd the whole mixture through a ſheet of Cap-paper, pour the filter'd liquor into a glaz'd Pipkin, and evaporate the ſuperfluous moiſture over a very gentle fire, which muſt be continu'd till the principal ſubſtance of the Rhubarb remains at the bottom of the Pipkin about as thick as the conſiſtence of an Extract. And to make advantage of all the

the good parts of the Rhubarb, having dry'd the ſediment and reduc'd it to aſhes; you may draw forth a ſmall quantity of fix'd Salt, to incorporate with the Extract, which you muſt put up in a cloſe pot well ſtop'd, to uſe upon occaſion, at which time you may mix with it a drop or two of oil of Camomile or Cloves.

There is no neceſſity of cutting or bruiſing the leaves of Senna to make the Extract, it being ſufficient to cleanſe them well before you uſe them, obſerving moreover the ſame method as for the Extract of Rhubarb.

The Extract of Rhubarb is one of the moſt gentle and wholeſome Purgatives that are. For by emptying the ſtomach and bowels of ill humours without any violence, it fortifies all the parts which they poſſeſs'd, and reſiſts the malignity of the ſame humours. It goes for a ſpecifick purger of choler, eſpecially among thoſe who think there are medicines that purge by Election: though there be no medicament able to ſeparate them the one from the other, when they are mingl'd together, and to purge out one alone by its ſelf, unleſs the reſt that are mix'd with it iſſue forth at the ſame time. This Extract is chiefly preſcrib'd in Diarrhea's, Lienteries, Diſenteries, Icterical diſtempers, Cachexites, and in other diſeaſes of the ſtomach, liver and ſpleen, as alſo in tertian and other Agues proceeding from choler, and to kill worms: the doſe is from half a Scruple to half a dram, in Bolus or in Pills.

The Extract of Senna is chiefly to purge melancholly humours; though that hinders not but that it may purge cholerick humours, or any ill humours gather'd together in the ſtomach and bowels. The doſe is the ſame, as for the Extract of Rhubarb.

CHAP. LV.

Of the Extract of Coloquintida.

COloquintida is a kind of Gourd, about the bingeſs and ſhape of an Orange; light and white when the rind is taken off, and of an extraordinary bitter taſt. It contains two principal ſubſtances, the one a watry Salt, and the other Gummy. Which laſt is here more abundant then in Rhubarb. So that ſome Authors make uſe of nothing but the Spirit of Wine for its extraction; and among the reſt *Martin Rulandus*, who making frequent uſe of the tincture of Coloquintida, drew it forth with the Spirit of Wine, and call'd it the *Golden Spirit of Life*. But becauſe it is requiſite that the Extract ſhould contain an equal proportion of both the ſubſtances, the beſt way will be to proceed in this manner.

Having cleans'd the Coloquintida from all its grains, and cut the Pulp very ſmall, put a pound thereof into an indifferent large Cucurbit; and having plac'd it upon a Bath of Sand, and pour'd upon the Coloquintida ſix pints of good new white-wine; cover'd the Cucurbit with its head, and well luted it, and fitted a Recipient to its Beak, kindle a fire under the Bath, which you muſt keep very ſlack for ten or twelve hours. Then having unluted the veſſels, ſtrain'd and forcibly ſqeez'd out the infuſion, and ſet it apart, return the ſediment into the Cucurbit, and pour upon it a pint of good Spirit of Wine, and all the Wine which was made uſe of in the former tincture, and which was diſtill'd into the Recipient. Then covering the Cucurbit with a veſſel of Rencounter perfectly well luted, and having macerated the whole for twelve hours in a Bath like the former, but with a little more heat, ſtrain and preſs forth the tincture with a good ſtrength, and having mix'd it with the former, and paſs'd both through a Sheet of Cap-paper, put it again into a Cucurbit, and having cover'd it with a head carefully luted, and fitted a Recipient and well luted it to the beak, draw back again in a Sand-bath with a moderate fire the Spirit of Wine, which will ſerve another time for the like Tinctures: then taking off and unluting the veſſels, pour all the liquor that remain'd in the Cucurbit into a glaz'd Pipkin, and evaporate the ſuperfluous moiſture by degrees in a Sand-bath, with a moderate heat, till it have acquir'd the conſiſtence of a Rob: then letting it cool, ſhut it up cloſe in a bottle, to mix it upon occaſion with other purgative Extracts, at the end

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of their evaporation, or for other uſes. You may alſo continue evaporation, and reduce this Rob to a real Extract of Coloquintida.

Some in the preparation of this Extract make uſe of Troquisks of Alhandal, which are made of the pulp of Coloquintida powder'd, and Muſcolages of Gum Tragacanth, intending thereby to qualify the ſharpneſs and the violent operation of the Coloquintida, as to thick'n and multiply the Extract which is not over abounding of it ſelf; which is not amiſs for them that ſo intend it.

The principal vertue of the Extract of Coloquintida, is to expell the ſeroſities of the remote parts of the body. For which purpoſe it is very proper for the cure of Hydropicks, where gentler medicines will not prevail. It is alſo commended in diſeaſes of the joints, and in Rhumatiſmes, and againſt the Gout, mixing it with other Extracts, eſpecially with that of Rhubarb to quallify its activity, and fortify the parts at the ſame time. It is giv'n alone in Pills, from two or three grains to eight or ten, or mix'd with other Extracts, and then the doſe is proportion'd with reſpect to the quality of the reſt.

CHAP. LVI.

Of the Extract of Tithymal.

I Will notin this preparation, nor any where elſe, imitate the Ancients in the infuſion which they make of the root of Tithymal, for fear of carrying off by that powerful acid, that which is chiefly ſought for in this Extract, which is to purge ſeroſities, and particularly Hydropick waters; believing that this preparation may be better made, without making uſe of any ſuch acid, if this method be obſerv'd.

Having gather'd in the month of *May*, in fair weather, what quantity you pleaſe of the whole plant of the leſſer Eſſula or Spurge, waſh it well, then bruiſe it in a Marble Mortar with a wood'n Peſtle, and fill about two thirds of a glaſs Cucurbit, then pouring upon it good new white-wine, till it ſwim above four good fingers breadth above the herbs, cover it with a veſſel of Rencounter well luted; then having kept it for four and twenty hours upon a Bath of Sand, over a very moderate fire, ſtrain and preſs out the infuſion, and keep it apart, then return the ſediment into the Cucurbit, and having pour'd upon it good Spirit of wine till it ſurmount the ingredient only one good fingers breadth, cover the Cucurbit again with a veſſel of Rencounter, and having well luted the jointures, keep it five or ſix hours in the ſame Bath, then having again ſtrain'd and preſs'd out the laſt infuſion, and having mingl'd the liquor with the former, paſs them through a ſheet of Cap-paper; then put them into a clean Cucurbit, plac'd in a Sand-bath, having cover'd it with its head, and well luted the jointures, as alſo thoſe of the Recipient fitted to the beak, and recover the Spirit of wine with a moderate fire; Then pouring out the remainder into a glaz'd Pipkin, plac'd in the ſame Bath, gently evaporate the ſuperfluous moiſture, till that which remains do become as thick as an extract. Then letting it cool, aromatize it with ſome few drops of oil of Anniſeſeed, Cloves or Cinnamon, and keep it till occaſion.

The Extract of Spurge is a powerful Hydragogue or drawer forth of water; and therefore is made uſe of with ſucceſs in dropſies, from half a ſcruple to half a dram, in Bolus or Pills, repeating the uſe, and increaſing the doſe according to occaſion.

You may prepare ſeveral other Extracts proper to purge waters, and among the reſt thoſe of the Roots of Orrice, Briony, and Elder; drawing forth the juice, depurating the juices, and cauſing them to evaporate. ſoftly in a glaz'd pipkin, to the thickneſs of Extracts: or by macerating theſe roots, well bruis'd in white-wine, for ten or twelve hours, ſtraining and preſſing out the infuſion, and filtring and evaporating the liquor to a neceſſary conſiſtence. The doſe and uſe of theſe Extracts are much the ſame with thoſe of the Root of Spurge.

There is alſo a water purging Extract to be prepar'd more violent then theſe, with

with the clarified juice of the fruit of the wild Coucumber, evaporated over a ſmall fire, in a glaz'd earthen pipkin, to the conſiſtence of an Extract. Which Extract is call'd Elaterium, the doſe whereof is not above two, three or four grains at moſt. I omit thoſe Extracts which may be drawn from the leaves or ſeeds of Sea Bindweed, Spurge Lawrel, Dwarfe Bay, Hops and Elder: the preparation whereof would be eaſy enough, were they much in uſe.

You may alſo dry and burn the ſediment of theſe Extracts to draw forth a Salt out of them, and to mix with them, when they are perfectly prepar'd.

CHAP. LVII.

Of the Extract Roſin, *or* Magiſtery *of* Scammony.

ALthough in diſtilling Scammony through a Cornute, you may draw fine ſubſtances out of it, which are uſually extracted out of ſeveral other parts of Vegetals, yet we ſeldome put our ſelves to the trouble, in regard the medicines would not be extraordinary. And therefore it is ſufficient to make uſe of the Roſiny part, which is uſeful upon many occaſions, being once ſeparated from the Terreſtrial part. For the accompliſhing whereof, after you have made choice of pure Scammony light and very Roſiny, beat it ſmall, and put a pound thereof into a glaſs Cucurbit, and pour upon it good Spirit of Wine, four fingers breadth above the Scammony, cover the Cucurbit with a veſſel of Rencounter, and having carefully luted the jointures, and well ſhak'n the matters to facilitate the penetration of the wine, place the Cucurbit in a Sand-Bath, never ſo little heated, and keep it there for twenty four hours, every foot ſtirring or ſhaking the whole. Then having pour'd out by inclination, and ſet apart the colour'd and clear Tincture, which ſwims at the top of that which is not diſſolv'd, pour in as much new Spirit of wine as at the firſt time, and ſtopping the Cucurbit again with its veſſel of Rencounter, renew the digeſtion again in the ſame Bath for the ſame time, ſtirring it as before, which will ſuffice for the entire diſſolution of the Roſiny part of the Scammony; then paſs this Tincture through Cap-paper, and having made the Cucurbit very clean, pour it together with the firſt clear Tincture into the Cucurbit, which after you have cover'd with its head well luted on, and fitted and luted a Recipient to the beak, you muſt place in a Sand-Bath, and with a moderate fire draw back about two thirds of the Spirit of Wine. After which having unluted the veſſels, you ſhall find at the bottom of the Cucurbit the Roſiny part of the Scammony of a colour inclining to purple, tranſparent, and as thick as well boil'd honey; which may be call'd the Extract of Scammony; above which you ſhall ſee the more watry part of the Spirit of wine, which muſt be ſeparated by inclination; then gently warming the Cucurbit, pour out the Roſin into an Earthen glaz'd Pipkin, and having cover'd it with a paper, expoſe it to the Sun, or ſet it over a Bakers oven to dry, ſo that you may pouder it, when you come to uſe it.

You may have a Magiſterick of Scammony by emptying into a glaz'd Earthen Pipkin, ſome part of the Tincture of Scammony, and pouring upon it eight or ten times the weight of cool fair water. For by that means the Spirit of wine which diſſolv'd the Roſiny part of the Scammony, being weakn'd by the water, is conſtrain'd to forſake the ſame ſubſtance; whence it comes to paſs that the Liquor looks like milk, and that the Roſiny ſubſtance precipitates to the bottom, being ſeparated from the liquor; the reſt ſwimming above the liquor, or adhering to the ſides of the Tincture, whence it may be ſeparated, after you have pour'd out the liquor by Inclination.

The chief vertue of Roſin of Scammony is to purge cholerick and flegmatick humours. The doſe is from five or ſix to twelve or fifteen grains, mingl'd in ſome conſerve, like, a bolus, or elſe in proper liquors. But you muſt be very carefull to grind it very ſmall, and to mix with it a fourth part of Almonds, or of ſome

cold

cold ſeed well cleans'd to devide the parts of the Roſin, and to prevent it from ſticking to the Tunicles of the ſtomach, when it ſwims above the liquor which may cauſe griping pains, and over-purgation.

CHAP. LVIII.

Of the Extract Roſin, *or* Magiſtery *of* Jallap.

JAllap conſiſting of more earthy and watry ſalt parts, and leſs Roſiny, then Scammony, you will do well to employ two diſtinct Menſtruums to diſſolve and extract the two diſtinct ſubſtances; contrary to the judgement of moſt part of Authors, who looking after the Roſony ſubſtance of the Jallap, and neglecting the reſt, make uſe of only Spirit of Wine for its Extraction. But that you may not looſe any of the good parts of the Jallap; after you have beat a pound very ſmall, and put it into a glaſs Cucurbit, pour upon it four pints of white-wine, and having blended them well together, and cover'd the Cucurbit with a veſſel of Rencounter well luted, ſet it four and twenty hours in a Sand-bath over a very gentle fire, ſtirring the ſubſtances every foot, without unluting the veſſels, unleſs at the end. At what time having taken off the veſſel of Rencounter, put a head in its place, and fitted and luted a Recipient to the beak of the head, increaſe a little the fire of the Bath, to cauſe the Spiritous part to diſtill, which you muſt keep. Then having unluted the veſſels, and ſtrain'd and ſquees'd out, filter'd and ſet aſide the liquor, return the ſediment into the Cucurbit, and pour upon it a pint of good Spirit of wine, together with that which was before diſtill'd and ſet aſide. After which having carefully ſhaken the Ingredients, and cover'd the Cucurbit with a veſſel of Rencounter, keep it four aud twenty hours over a ſoft fire in a Sand-bath, then unluting the veſſel of Rencounter, pour forth by inclination the clean clear Tincture that ſwims upon the ſediment; upon which, after that, pour another pint of good Spirit of wine; cover the Cucurbit with its veſſel of Rencounter, and ſet it in the ſame Bath, and renew Maceration for the ſame time. Then having filter'd and mix'd the laſt Tincture with the former, you may if you pleaſe mingle both with the firſt of all, and having pour'd them into a glaz'd earthen Pipkin, evaporate the ſuperfluous moiſture over a very gentle heat, till the ſettlement be thick enough, and that it may be properly called, as it is a true Extract of Jallap. To which you may very properly add the fix'd Salt, extracted from the ſediment dried and reduc'd to aſhes.

But if you would have the Roſin or Magiſtery of Jallap apart, you muſt look for it only in the two laſt tinctures, drawn forth with the Spirit of wine, proceeding as I have directed for the Magiſtry of Scammony.

The vertues and doſe of the Roſin and Magiſtery of Jallap are much the ſame with thoſe of the Roſin and Magiſtery of Scammony. The Extract alſo tends to the ſame end. But you may increaſe the doſe to half a dram, as well by reaſon of its moiſture, as of the other parts of the Jalap, which increaſe the weight and quantity of the Roſin.

The ſame method is to be obſerv'd in preparing the Extracts of Roſins, and Mageſteries of Agarick, Mechoacan, Turbith, Hermodactiles, Ellebore, and ſuch other Roots, the parts whereof reſemble thoſe of Jallap.

CHAP.

CHAP. LIX.

Of the Panchymagogue Extract.

THere is no Chymical Compoſition more varied in Authors then this Extract, as well in reference to the ſimple Ingredients, as to their doſe and proportion. But ſetting all diſputes aſide, and leaving thoſe Extracts to themſelves, I will here produce one, which as to the doſes, and preparation of the ingredients, ſeems to me very reaſonable.

Take two ounces of the Extract of Aloes, and as much of the Extract of Rhubarb, one ounce of the Extract of Senna, much of each of thoſe of Scammony, Jalop, Agarick, and Coloquintida, and half an ounce of that of black Hellebore. Prepare each of theſe Extracts as I have directed in the foregoing Chapters; but let them be no thicker then Honey. Having put together and well mingl'd theſe Extracts, in a little glaz'd earthen Pipkin, plac'd in a Sand-bath over a very moderate fire, evaporate by degrees the overplus of the ſuperfluous moiſture, ſtirring them gently from time to time with a Spatula, till they are come altogether of a good conſiſtency of an Extract. At which time having taken off the Pipkin from the Bath, and let the Extract ſtand till it be almoſt cold, incorporate into it four drops of the diſtill'd Oil of Cloves, and as much of each of the Oils of Fennel, Lavender, and Marjoram. The Extract will then be perfect, and fit to be put up cloſe in a Galley-pot, or ſome other Veſſel, or oil'd skin, to uſe upon occaſion.

Proceeding according to this method, there is no fear of the ſeparation of the Roſiny ſubſtances, from the concenter'd watry ſalt ones; which might happen to this Extract, if the Roſins were not powder'd and mix'd with ſome Almonds, or ſome cold Seeds in grinding them, or if they were not diſſolv'd a-new in Spirit of Wine. For experience and reaſon plainly ſhew us, that theſe different ſubſtances unite exactly together, and remain united ſo long as the Extract keeps its uſual conſiſtency; and that the Roſiny cannot be ſeparated from the watry ſubſtances, but by diſſolving the latter in ſome watry liquor, which is not able to diſſolve the Roſiny. And though it were impoſſible to mix theſe Roſins in a watry and ſalt Extract, thick and cold, without putting them in, in powder before, when they are dry, nor to reduce them well into powder without mixing ſome ſeed or ſome oily matter apt to divide the parts; yet it is certain, that being once well mingl'd with the Extract, they cannot ſeparate of themſelves. Neither in this preparation is the diſſipation of the principal parts of Aromaticks to be fear'd, in regard that inſtead of an Extract, which ſome Authors would have drawn to mix in this, we make uſe of their diſtill'd Oils, which contain in a ſmall room their principal vertues; and becauſe theſe Oils cannot diſſipate themſelves, as being mix'd when the Extract is almoſt cold.

Now whereas *Zwelfer* pretends to draw forth with the Spirit of Wine, the Extracts of parts of Plants, whoſe ſubſtance contains a mixture of watry, ſalt, and Roſiny; I perſiſt in my firſt opinion, which is, that the former ought to be extracted in watry liquors, before we make uſe of Spirit of Wine for the extraction of the latter; conſidering that that Spirit being well rectified, as it ought to be, has not force enough to extract the firſt. I wonder alſo, that a perſon who having been an Apothecary, and one that in his writings brings in queſtion the ſufficiency of his Brethren, did not foreſee, that he expos'd himſelf to their cenſure, while he only pretended to make uſe of the Spirit of Wine for the extraction of theſe mixt ſubſtances; and more, by affirming, that the volatile Salts eaſily unite themſelves to the Spirit of Wine, ſince the trials that Apothecaries make thereof every day, make it manifeſt, that theſe Salts do not diſſolve in Spirit of Wine, as being all inflammable, and that the ſame Spirit diſſolving the oily particles which are mix'd among the ſame volatile Salts, preſerves in its own body the ſame Salts without diſſolution, and that it hinders alſo diſſipation by ſwimming above them, provided the bottle be well ſtop'd. Beſides that he himſelf confeſſes, that the Spirit of Wine cannot diſſolve the fix'd Salts, which are with the volatile, which is the chiefeſt ſubſtance which the watry part of theſe parts of Plants contains.

This

This Extract is call'd by the name of *Panchymagogue*, or univerſall purger of humours, becauſe it purges in general all bad humours out of the body. It is giv'n in Pills, like other Extracts, from half ſcruple to half a dram, or two ſcruples.

CHAP. LX.

Of Dregs.

WE may put *Dregs* among Chymical preparations of the worſt invention, which may be better let alone, then be prepar'd with waſt of time; eſpecially following the opinion of thoſe who have written firſt thereof. The name of dregs is rightly given to the filth, that ſeparates and falls to the bottom of ſeveral liqours. But by the name of dregs we are here to underſtand only a white mealy ſubſtance, fall'n down and gather'd together at the bottom of the juice, or liquor of certain Roots, as of Briony, Aron or Wake-Robin, Iris. *&c.* This white and mealy ſubſtance, being ſeparated by Inclination from the liquor; is dry'd in the ſhade or in the Sun; and though I adviſe no perſon to make theſe preparations, I will not omit to ſet down the method of making them.

Take the Roots of Briony, Orrice or any other root well grown and newly gather'd, and having well waſh'd and cleans'd them from their outward rind, raſp them very ſmall, and having preſs'd out the juice through a very ſtrong cloth, let it ſtand two or three days in an earthen Pipkin. Then by inclination pour out the clear liquor, that ſwims above the white ſubſtance, which is become Dregs. This is afterwards to be dry'd in the Sun, or in the ſhade at leiſure, or if you are in haſt, in a Bath of Sand, with a very moderate heat. By this means you have the Dregs of the root made uſe of. Which cannot be other then a ſubſtance void of vertue being deſpoil'd of the vertue of the juice, which is ſeparated rom it: and which cannot produce the effect of Extracts drawn from the juice of thoſe Roots; I ſay moreover, that the powder of theſe Roots cut in little round pieces, and dry'd with the juice, is much better then the dregs any way prepar'd.

The Extract drawn from the juice of the Root of Biſtort or ſnake weed is call'd particularly by the name of Cherſa or Gherſa. Of which they do not only ſeparate the liquor that ſwims above the feces, but alſo dry it with the feces, dividing it into little veſſels, and expoſing it to the Sun, till it is fit to be powdred.

CHAP. LXI.

Of the Salts of Vegetals.

THE preparation of ſome Salts of Vegetals which I have occaſionally ſet down, when diſcourſing of the diſtillation of ſome ſorts of Plants, not being enough to give all the might neceſſary for ſuch a ſubject, ſo conſiderable and of ſo large an Extent, I thought it covenient here to make ſome new Reflections, and at the ſame time to communicate my method to publick view; not only in reference to preparations that paſs for common, but alſo thoſe which having been known but only to few people, have been conceal'd or counterfeited by thoſe that had the true knowledg thereof.

Formerly it was not believ'd that the Salts of Vegetals were volatile, becauſe that that which is drawn from them by uſual means, does not exhale with the fire, but rather endures Fuſion, then to quit the bottom of the veſſel where it is put. However

ever they would not have fall'n into ſuch an error, had they well underſtood the nature of Salts, eſpecially of thoſe which are drawn from Vegetals. For we muſt believe, that there are two ſorts of them, the one of an acid, the other of a ſalt taſte; that each of theſe Salts are naturally volatile, as well while they are mix'd together in the mix'd body, and as it were in confuſion among the other principles, as when Chymiſtry has ſeparated them by Art one from another. But in regard of their great inclination to unite together, they do it ſo ſoon as they are ſeparated from the other principles; and uniting as ſoon as they can that ſmall quantity of earthineſs which ſerves to ſtrengthen their union, they compoſe together a fix'd Salt which moſt part of the ancients, and ſeveral of the moderns believe to be of it ſelf, and naturally ſuch. Not conſidering that the quality of fix'd did not happen either to the one or the other of theſe Salts, but by the union of the volatile with the acid, and of both together with ſome particles of earth, which ſerv'd them as a foundation.

I believe moreover, though it cannot be ſaid, that there is any Plant which has not its proper Salt, yet there is no poſſibility to diſtinguiſh it, or to qualifie it to be ſuch, until it be ſeparated from the other ſubſtances, and that uſtion and incineration of the ſubſtances being the moſt proper ways to bring it to paſs, the ſulphury part flies away by that means, as alſo the watry, which tempering and weakning the acid Salt, hinder'd its ſtrict union with the volatile Salt. I ſay moreover, that the acid and volatile Salts finding themſelves thus disingag'd from their principal oppreſſion, and aſſiſted by the acid particles of the fire, which have much conformity with them, unite by degrees, but very ſtrongly and ſtrictly one to the other; that the ſmall quantity of earth which is mix'd among them, promotes their union, ſo far it is from hindering it; and that the Salt which proceeds from this union, is properly a body compos'd of acid and volatile Salt, and ſome particles of earth which paſs'd through the filter with them after they were diſſolv'd in Water.

I alſo ſay, that in the uſtion and incineration of the Plants, there is a colliquation or rather melting of the ſubſtances, and particularly of the Salts, without which they could not act, nor re-act as they do one upon another, to compleat their intimate union, or make ſuch a compoſition as we find. The qualities whereof appear to us very different from thoſe which are obſerv'd to be in the ſame Salts when they are ſeparated. That the generation, conſiſtence, and form of all Vegetals depends upon theſe two Salts; and though that they may ſeverally ſubſiſt the one without the other, and be of themſelves incorruptible, when they are ſo put up that the air cannot corrupt them; yet they much better maintain and uphold one the other, when they are entirely united; and that we may ſay of them, that they are like the two Poles of Nature; the foundation, cement, and ſuſtainment of all animated or inanimate beings; and that there is no generation or production without them.

CHAP. LXII.

Of the Salt of Carduus Benedictus.

THE uſtion and incineration of the parts of Plants, is not always neceſſary for the union of the acid with the volatile Salt, to compoſe a fix'd Salt, in regard we find by experience, that without their help we can draw from Carduus Benedictus, Wormwood, Sorrel, Centaury, and many other Plants, a Salt compos'd of acid and Alkali, much reſembling the nature of fix'd Salts; though not ſo able to reſiſt the fire, as that which you may draw from the ſame Plants by reducing them to Cinders. And though it is not to be expos'd to the fire without ſome remarkable diminution of its quantity, and chiefly of the watry part, which was incorporated with it, and without ſome diſſipation of the acid, which was not entirely united with the volatile, or had ſurmounted it in quantity; nevertheleſs, this Salt not having ſuffer'd the violence of the fire, ordinarily made uſe of for the uſtion and incineration of theſe Plants, and containing in it ſelf their moſt eſſential part, is much

better for phyſick then that which has ſuffer'd incineration, in regard it ſtill contains one good part of the Sulphury ſubſtance of the ſame plant, whence it was drawn, and that it has in part the ſavour and ſcent of it, ſo long as the watry part of the plant which is incorporated with it, does not fail to abate it's acrimony. Theſe Salts are call'd Eſſential Salts, becauſe they contain the moſt Eſſential parts of the plant. They are generally of a dark colour, unleſs calcin'd in a Crucible, or that you diſſolve, filter and coagulate them again; though it be much better to keep and make uſe of them in their dark colour, then to diſſipate their Sulphury part by Calcination, and withall the ſcent and taſte of the plant which they retain'd.

The preſidents which I have ſet down for the Extraction, depuration and evaporation of the juices of plants, thereby to extract their Eſſential Salt; as alſo for their Uſtion, incineration, lixiviation, filtration, and coagulation, thereby to extract their fix'd Salt, having no need of repetition, I ſhall not any farther enlarge this Chapter.

The Eſſential Salt of Carduus Benedictus, containing much of the ſulphury parts of the plant, is proper to provoke ſweats, being giv'n eſpecially in its own water. It is an enemy to worms, and reſiſts the putrefaction of humors, and the malignity of Fevers. That which is drawn from the aſhes of the ſame plant, has almoſt the ſame vertues, but the effects are rather purgative, then Diaphoretick. This latter, being more fix'd, is much more proper to mortify the acids, which excite fermentations in the ſtomach and lower parts. The doſe of both theſe Salts, is from half a ſcruple, to half and ſometimes a whole dram, in its own water, in broth, in wine, or in any other convenient Liquor.

CHAP. LXII.

Of the Eſſential Salt, Cream *or* Cryſtal *of* Tartar.

THere is no mix'd body among Vegetables, which abounds ſo much as Tartar, in volatile Salt, and acid Salt, for to ſpeak properly theſe two Salts are, very nigh, the whole conſiderable ſubſtance of Tartar, in regard there is no notice to be tak'n of the water or earth that is found therein. Tartar has the juice of Grapes for father, Fermentation for its mother, and the Cask is the Matrix. It is to be lookt upon as a remarkable example of the natural union of the volatile Salt ſalt with the acid Salt, and of the change of the firſt into fix'd by the union of the latter; as alſo, as an example of the Lapidification in our bodies by the conjunction of acid and volatile Salts, and of them two with ſome terreſtrial particles.

This change of the volatile Salt ſalt of Tartar into fix'd, is much more natural, and done with leſs violence, then that which happ'ns to the Salt of plants by incineration. Nor does it ſuffer any other heat then that which its own acidity cauſes, after it has rais'd the fermentation. It is alſo in the reciprocal action upon one another of this acid Salt with the volatile Salt ſalt, and the volatile ſulphury Salt of the juice of the Grapes, during Fermentation, that the ſame volatile ſulphury Salt unites to it the greateſt ſhare of the watry part of the ſame juice, and as much of the acid Salt as is requiſite for its perfection, and for its alteration into wine: and that another part of the volatile Salt ſalt unites it ſelf with the reſt of the acid, and ſome ſmall quantity of the Terreſtrial part of the juice, and that being fix'd and lapidifi'd, it ſticks like Cyrſtal to the heads and bottoms of the Casks; and and that another portion of the volatil ſulphury Salt mix'd with a little of the Salt ſalt, ſome of the Terreſtrial part, ſome remaining part of the wine, and a very little acid, deſcends to the bottom of the veſſel, and makes the Lee.

But it is not enough that nature has made all theſe different ſeparations and unions of ſubſtances in the ſame Cask, and that ſhe has beſtow'd conſiderable preparation. Chymiſtry muſt make an improvement upon all theſe things, and by new-

new ſeparations and purifications, ſhe muſt bring forth the conceal'd and confus'd ſubſtances, and give them perfections beyond what nature has afforded them.

The firſt and moſt ſimple preparation of Tartar is that of its purification, which may be more or leſs perfect as you your ſelf deſire it to be. For after you have made choice of the pureſt, the moſt ſhining and the moſt Cryſtalline Tartar, and powder'd it very ſmall, ſomtimes it is enough to ſtir this powder in fair fountain or river-water, and to waſh it over and over again, till there be no filth remaining, but that it come out as clear as it went in. Nevertheleſs this Lotion will not bring Tartar to its height of purity; only it ſeparates the wooddy and terreſtrial parts, provided they be not Sandy, and makes the Tartar more fit for the uſes to which it is deſign'd. Yet ſome prefer Tartar thus cleans'd before that which is diſſolv'd in boiling water, believing that the heat of the water diminiſhes the ſubſtance, or changes the virtues.

The ſecond and higheſt putrifaction of Tartar is the reduction of it into Cream or Cryſtal, Which may be thus done. For example, put three or four pound of Tartar waſh'd as I have directed, into a clean copper Kettle, over a good Charcoal fire, in ten times as much fair water, and having let them boil for a good quarter of an hour, ſtirring them from time to time with a wooden Spatula, and taking off the ſcum, ſtrain them through a wollen cloth, and then ſtrain that liquor again, till it be all perfectly clear. Then letting it cool, you ſhall find a kind of a Cream ſwimming above the water, like a cruſt, and the reſt of the eſſential Salt of Tartar ſticking like pieces of Cryſtal to the ſides and bottom of the veſſels, which you muſt gather together, waſh and dry, to uſe, if you pleaſe, in that condition. But if you deſire to make it more beautiful, boil it in a large poſſnet in new fair water; and when it is altogether diſſolv'd, and the water ſo far waſted, that you may perceive the Cream to ſettle at the top like a thick skin, take off the Poſſnet gently from the fire; and letting the Liquor be quite cold without touching it, the Cream at the top will be very thick, and the clear and white Cryſtalls will ſtick to the bottom and ſides of the Poſſnett, which having waſh'd and dry'd, you may keep for uſe.

The great quantity of Cryſtal of Tartar which is made in thoſe Countries where Tartar is very common, is the reaſon that there they make uſe of Copper-veſſels; though it were better to boil your Tartar in Poſſnets of Pewter. For though the Tartar be not able preſently to penetrate and diſſolve much of the Copper; yet during that ſmall ſtay it makes in the Veſſel, it fetches off ſome particles that certainly mix among the Cream or the Cryſtalls; as may be obſerv'd in the Cryſtal of Tartar prepar'd in thoſe places, the ſubſtance whereof is dusk, and the white colour enclines ſomewhat to the colour of Copper: whereas that which is prepar'd in Pewter Veſſels, is perfectly white, and very tranſparent.

The ſeparation which the woollen bag makes of the parts of the Eſſential Salt, is the reaſon that it appears almoſt all in powder, at the bottom, and upon the ſides of the Veſſel; and that to have it in Cryſtalls, after you have boil'd it and diſſolv'd it in freſh water, you muſt take it off ſo gently from the fire; to the end that the liquor, not being ſtirr'd, the parts of the Eſſential Salt, may not be brok'n, and that the Cryſtals may be fair and whole.

In the mean while, we have great reaſon to admire in the Eſſential Salt, the force of the acid, proportionably mingl'd and united with the volatile; in regard that making a new body with it, it is not diſſolvable in cold water, but only in boiling hot, and that it ſeparates again and Cryſtallizes its ſelf as the water grows cold. However this union is not ſo inſeparable, but that it may be brok'n by art: for beſides that by putting theſe Cryſtals to the fire, and cauſing ſome portion of the acid part to diſſolve in a Crucible or a Cornute, the Salt which remains, having loſt its acidity and having chang'd its nature, becomes diſſolvable in the water, though fix'd and permanent in the fire. This union may be alſo broken, by adding to theſe united Salts ſome new acid; which being not of the Nature of the former, hinders not but that they may be diſſolvable in water, as they were when ſeparated; nevertheleſs, without reſtoring its nature to the volatile Salt, which is almoſt equally fix'd, provided the acid do not exceed the neceſſary proportion.

The ſame union may be brok'n by diſſolving this Eſſential Salt in water, and mixing with it Salt of Tartar, ſuch as is prepar'd by Calcination. For by that means,

the acid being maſter'd by the other Salts, and not being able to cloſe with ſo great a quantity, which it could neither ſtop, nor contain, reſumes its former nature, ſo that they become together all of them diſſolvable in water.

The principal uſe of Cream or Cryſtal of Tartar, is to cut and digeſt thick and viſcous humours, and to diſpoſe them to purgation. It is ſucceſsfully us'd in obſtructions of the Liver, the Spleen, and all the bowels; and the uſe thereof may be continu'd for ſeveral days, as occaſion requires. It is given from a ſcruple to a dram, in Broth, or diſſolv'd in ſome hot liquor.

CHAP. LXIV.

Of Cryſtal of Tartar Chalybiate.

THE opening virtue of Vitriol Salt, conceal'd in Steel, being able very much to augment that of the Cream or Cryſtal of Tartar, I thought it to the purpoſe to put them together, and by that means to make a compos'd Medicine, called by the name *of Cream or Cryſtal of Tartar Chalybeate*: for the preparation whereof ſome having bruis'd, boil'd and diſſolv'd a pound of Cryſtal of Tartar in ten pints of water, add thereto, toward the end, three ounces of the filings of Steel, and having well ſtirr'd the ſaid filings or duſt, ſtrain it hot through a woollen cloath, and after they have let the water cool, they ſeparate and dry the Cryſtalls, laden with the vitriolick part of the Steel, which they have diſſolv'd.

Others obſerving the ſame proportion of water, Steel-duſt, and Cryſtal of Tartar, and putting them together at the beginning over the fire, cauſe them to boil about a quarter of an hour, in other things obſerving the ſame method as before.

There are ſome, who after they have diſſolv'd a pound of Cryſtal of Tartar in boiling water, think it enough to throw in an ounce of Vitriol of Mars, or Iron prepar'd with Spirit of Vitriol, as I ſhall direct in place, then letting that liquor cool, they take off the Cryſtals that ſtick to the ſides and bottom of the Veſſel, and keep them for uſe.

Some having very judiciouſly pouder'd four ounces of Cryſtal of Tartar, and two drams of Vitriol of Mars, moiſten them, and reduce them into paſte, with about two ounces of ſome Cordial water; then drying it, powdring and adding to it ſome few drops of diſtill'd oil of Cinnamon or Cloves, they give it the name of Cyrſtal of Tartar Chalybeate. You may chooſe which of theſe preparations you pleaſe.

Cryſtal of Tartar Chalybeate is look'd upon as a ſpecifick remedy for the cure of ſeveral Chronicall diſtempers, and among the reſt, of obſtructions of the Liver and Spleen, Jaundies, quartane Agues, Hypochondriacal Melancholy, ſuppreſſion of the Menſtruums, Cachexies, and all diſtempers that come from obſtructions of the Matrix. It is not us'd till after general remedies; eſpecially Purgatives. The doſe is from half a ſcruple to half a dram in broth, or in ſome other hot liquor, in a morning faſting; and it may be continu'd as the Phyſitian ſees requiſite.

CHAP. LXV.

Of Cryſtal of Tartar Emetick.

THE choice which is made here of Cryſtal of Tartar to envelop and as it were to concenter in its ſelf the vomitive faculty of Antimonie, cannot but ſeem very reaſonable to thoſe, who conſidering that the acid part of this Cryſtal qualifying the violence of the vomitorie, renders the effects more gentle ſo that after a vomit or two, and that the ſtomack is thereby diſcharg'd of ſome part of the ill humours, the reſt falls downwards and works upon the matters which it meets with in thoſe parts.

Cryſtal

Cryſtal of Tartar being the Baſe of this preparation, I would not place it with thoſe of Antimony, though the principal effects of it proceed from thence. The ſame reaſon obliges me not to ſpeak here of that which concerns the Antimony; nor of the compos'd water which is to be made uſe of for the preparation of this Cryſtal.

Take four ounces of Cryſtal of Tartar, and as much Crocus Metallorum, prepar'd with Salt of wormwood, as I ſhall direct in the preparations of Antimony, and having finely pouder'd them and put the powder into a great Matras, pour upon them four pints of Aqua Benedicta of Serpoulet of Mynſich, of which I ſhall give you the receipt in the laſt part of this work. Then having ſtopp'd up the Matraſs, ſet it for three or four days in a Sand-bath over a very moderate fire, ſtirring the ingredients from time to time. Then augment the fire of the Bath, to the end the liquor may boil a little, and paſs it hot through a woollen cloath, leaving the Crocus Metallorum at the bottom of the Matras. Then when the liquor is very cold, ſeparate and dry the Cryſtals; after they are dry, pouder them and keep them for your uſe.

This Cryſtal is one of the moſt gentle and moſt excellent Vomits that can be prepar'd. For which reaſon it is giv'n to all ſorts of ſexes and ages, and to perſons the moſt nice and tender; and with much more ſafety then any other vomitory drawn from Antimony or any other Minerals. It is made uſe of very ſucceſsfully in Lethargies, Apoplexies, Epilepſies, Ravings and Rovings of the fancy, and in all other diſtempers of the brain. In diſeaſes of the ſtomach, Vomitings, Jaundiſe, Dropſies, in Quartane, Tertian, Quotidian, and continu'd Cholerick Agues. It is good alſo to empty the ſtomach of poyſons and other Morbifick matters. The doſe of this Cryſtal is from three or four to eight or ten grains, in broth or in ſome other hot liquor.

But though this Emetick Cryſtal work much more gently, then almoſt all other Emeticks; nevertheleſs you muſt not neglect the precautions to be obſerv'd, when Vomits are given; of which the principal are, not to give them to perſons who are ſubject to ſpitting of blood, Ulcers in their Lungs, narrow cheſted, their Lungs inwardly ulcer'd; nor to ſuch as are hard to vomit, nor to women with child. You muſt be careful alſo to give the Patient fat Broth, or Fleſh when the vomit begins to work, to eaſe the operation, and make it work more kindly.

CHAP. LXVI.

Of the fix'd Salt of Tartar, *and its diſſolution in Liquor.*

IT is not ſeaſonable here to conteſt about the fix'd quality which the Ancients and Moderns have giv'n to Sal Tartar, when they prepar'd it by the ordinary ways, making uſe of a violent fire. But we ſhould do ill to believe, that this Salt was of it ſelf ſuch, in regard it is naturally very volatile, and that it would continue in that condition, if as I have ſaid in another place, the volatile acid Salt, which makes one part of the compoſition of Tartar, did not fix it, by making a ſtrict union with it during its calcination. This alteration however, as conſiderable as it is, is not at all deſtructive, in regard you may reſtore to the greateſt part of this Salt its firſt volatility, if you free it from its chains, by ſeparating or augmenting the acid, ſo that it may maſter it, or if you prevent its union with it. Yet their conjunction is not without a notable advantage, becauſe that by fixing the volatile Salt, it hinders diſſipation, and for that it is ſerviceable for ſeveral uſes, where the volatile Salt alone cannot produce the ſame effects, not being able to withſtand the fire.

You may reſerve the ſediment of the Spirit and Oil of Tartar, of which I have ſpok'n, and having calcin'd it in an open fire, extract the Salt by the ordinary ways. But they that neither mind the Spirit nor the Oil of Tartar, may put ſome pounds of raw Tartar into a bag of large paper, and having ty'd it faſt, and laid it in water,

till

till it be well ſoak'd, put it in the middle of a Hearth of a great Furnace half full of Charcoal well kindl'd, and having cover'd it well, keep a good fire for two long hours. The fire being quench'd, the Tartar will remain calcin'd in a black lump, compos'd of an acid Salt, united with a volatile Salt which it has fix'd, and ſome earthy part of the Tartar which has mingl'd with it. Afterwards boil this maſs in a good quantity of water, and having paſs'd the Liquor through a ſheet of Cap-paper, return'd it into the Veſſel and boil'd it again with the ſediment in freſh water, refilter'd it and mix'd the ſame liquor with the former, evaporate the ſuperfluous moiſture over the fire, and the Sal Tartar will ſhew it ſelf at the bottom of the Veſſel very white and fix'd, which you may keep as it is, in a double glaſs Bottle well ſtopp'd, or ſet it in the Cellar or ſome moiſt place, till it be diſſolv'd into a liquor, which is improperly call'd Oil of Tartar, in regard it is only a Sal Tartar diſſolv'd; the diſſolution whereof you may haſten by adding only as much water as is neceſſary to keep the Salt in diſſolution.

They that deſire to make Salt of Tartar, or any other Salts of Plants, accounted fix'd, to look more white, and to preſerve them in their beauty and dryneſs, ſo that the moiſture of the air may neither penetrate nor diſſolve them, after they have conſum'd their ſuperfluous moiſture, may mingle them with about a third part of their weight of their Sulphur in powder, and cauſe it to burn and conſume over a good Charcoal fire, and having made a Lye and filter'd it, evaporate the liquor to a film, in a glaſs-Cucurbit over a Sand-fire. Then letting the ſubſtances cool, ſeparate and dry the Cryſtals, and evaporate again the liquor that ſwims at the top, to a film, to gain the Salt which is contain'd therein.

It is no wonder that theſe Salts, ſimply calcin'd, cannot reſiſt the penetration of the air; for having had in their calcination as much acid as was requiſite for their fixation, but not to fill up all the little intervals which the operation of the fire had left there, they have their pores open, and ſubject to any penetration, eſpecially that of the air, when environ'd by it. But when they meet an acid more powerful, ſuch as that which riſes from the Sulphur, which was mix'd and burnt with them in their laſt calcination, they fill themſelves in ſuch ſort that having no more vacuities, the acid of the air cannot break the ſtrict union which is between them.

Not that it is the beſt way to expoſe theſe Salts to ſuch ſtrong and frequent calcinations, which cannot be done without ſome notable diminution of ſome of their beſt parts, and among the reſt of the ſpiritous Sulphur, as is obſervable in the diſſipation of the ſcent and ſavour of the Plant, which happens always to Salts thus calcin'd, which would preſerve a good part of them, if they were not ſo expos'd to the violence of the fire. Whence it comes to paſs, that there is great reaſon to prefer the eſſential Salts, which may be drawn from Plants with a moderate and gentle fire, before thoſe that undergo the violent fires of calcination.

Salt of Tartar is as it were a model of all the fix'd Salts of Plants. There is none more us'd, either in the one or the other Pharmacy, eſpecially in Chymiſtry, which uſes it not only among opening and purging medicines, and to mortifie the acids which cauſe the fermentations in our bodies; but alſo in the diſſolutions and precipitations of ſeveral ſubſtances, eſpecially of Minerals. Not to mention external applications as uſeful to take away ſcars and blemiſhes in the face, as for ſpecifick remedies in all diſeaſes of the skin, caus'd by the acids.

There are ſome who after they have beaten equal parts of Tartar and Niter together, put the powder into a great Iron Mortar well heated, and ſetting it over a fire of kindl'd Charcoal, calcine the powders immediately, and find at the bottom a black Salt, which they put off for Salt of Tartar, though the fix'd Salt of the Niter make above half of it.

There is a Cryſtalline Salt alſo to be prepar'd, with equal parts of Salts of Tartar and Niter, well purify'd, diſſolv'd in Roſe-water heated, then filter'd, coagulated, and cryſtalliz'd after the ordinary manner; this by ſome is call'd by the name of *Sal Tartar Niter'd*, very proper to open obſtructions of the Liver, Spleen, Kidneys, and Ureters; as alſo to aſſwage inflammations of the mouth and throat, giv'n in proper liquors from half a ſcruple to half a dram.

CHAP.

CHAP. LXVII.

Of Tartar *vitrioliz'd.*

THough the boiling and great heat, which is perceiv'd in the veſſel and in the ſubſtances, at the time of the conjunction of the Salt or Liquor of Tartar to the rectifi'd Spirit of Vitriol, is taken by many for an effect of the Antimony which they believe there is, between the Acids and the Alkales; yet I dare preſume to ſay, that the great inclination which theſe Salts have to unite reciprocally together, compelling them to act and react, one upon the other, with an extream quickneſs, and ſome ſort of violence, is the cauſe of that boiling and heat which follows. For as the boiling and heat ceaſes, when the Salts have reciprocally penetrated and ſatisfied each other, ſo that neither happens afterwards, whatever ſuperaddition you make of the one or the other to the two proportionally united: It would be ill done to impute that to any Antipathy, which if it were, would prove the deſtruction of the one or the other of theſe Salts, or of both together; which never happens. So that if you put the Tartar vitrioliz'd into a Cornute, and urge it with a quick fire, you ſhall draw forth the Spirit of vitriol almoſt in the ſame condition as when you firſt made uſe of it, and find the Salt of Tartar at the bottom of the Cornute without any ſignificant alteration. This Effervency has urg'd ſome to give to Tartar vitrioliz'd the name of a Magiſtery, though you perceive no precipitation, in the conjunction of the acid Spirit with the fix'd Salt; but only a Coagulation which proceeds from the inward union, and corporification of the Spirit of Vitriol with the Salt of Tartar.

They are alſo in a great error, who fear leſt the moſt volatile part of this Tartar vitrioliz'd, ſhould be diſſipated in that great heat and boiling of the ſubſtances, ſeeing it is moſt certain that nothing riſes but an inſipid water; and that reaſon and experience teach us, that the volatile and fix'd Salts, having a mutual inclination to join to acids, embrace them, and mix themſelves both very ſtreight and cloſely together; So that it is a difficult thing to ſeparate them; as may be verify'd in the conjunction of volatile Salts of Animals to Acids; where the heat and effervescency, though very conſiderable, cauſe nothing to aſcend but a water very inſipid and without ſcent. Though ſome have adviz'd the uſe of ſmall funnells, to pour the acids gently upon the volatile Salts, and to ſtop the orifices of the Veſſels, fearing to little purpoſe, the diſſipation of one part of a Salt whoſe volatile nature the Acid changes in a moment into fix'd, by the ſtrict union which it makes with it.

There is ſome difference in Authors about the proportion of the Salt of Tartar with the Spirit of Vitriol for the preparation of Tartar vitrioliz'd. For which the ſureſt rule is to ceaſe to pour the one upon the other, when the Ebullition ceaſes. For that is a ſure ſign that the fix'd Salt, and the acid Spirit have ſufficiently penetrated and ſatisfi'd one another, and that they are mix'd to their due proportion.

This Salt and this Spirit is to be mix'd in a large and high glaſs-Cucurbit, that the Ebullition may have room enough. You may either pour the Spirit of Vitriol upon the Liquor, or the Liquor upon the Spirit. Only you muſt be careful to pour the one upon the other very gently, to ſtir the liquors from time to time, the better to unite them well, and not to pour any more, when the Ebullition ceaſes. At which time place the Cucurbit in a Sand-bath over a very moderate fire, and gently evaporate the ſuperfluous moiſture to attain a thin film, that you may have the Tartar vitrioliz'd white and Cryſtalline; or elſe to the total conſumption of the moiſture, that you may have it in Maſs or in white powder.

Yet you may ſhorten your work very much, by putting what quantity you pleaſe of very white and very dry Salt of Tartar in powder, in the bottom of a glaſs-Cucurbit, pouring gently upon it as much good Spirit of Vitriol, as it can ſuck up, and forbearing to pour any more when you perceive the Ebullition ceaſe. For by this means you have a Tartar vitrioliz'd very white and dry, never needing to evaporate any ſuperfluous moiſture. This preparation may alſo ſerve for a general

example

example not only of the union of Alkali's with acids; and of the great alteration which happens to their ſcent and their other qualities by their conjunction; but of the change of liquid into ſolid; which manifeſts it ſelf in Spirit of Vitriol, which unites it ſelf and makes but one body with the Salt of Tartar.

Tartar vitrioliz'd is an excellent digeſtive; it cuts and opens. The great uſe of it is to open obſtructions of the Liver, Spleen, and all the Bowels, as alſo of thoſe of the Matrix. The doſe is from half a ſcruple to half a dram in convenient liquors. It is alſo mix'd with Opiates, and among other opening and purging remedies.

CHAP. LXVIII.

Of Salt of Tartar *Foliated.*

SEveral Authors have treated of this preparation, under ſeveral names and methods, which nevertheleſs tend all of them almoſt to the ſame end or ſignification. Their principal end being to ſatiate, as I may ſo ſay, the fix'd Salt of Tartar with the acid of Vinegar, and to fill up the vacuums remaining as well in the one as in that of the Spirit of Wine, to unite them more cloſely together. Some adviſe to imbibe the Salt of Tartar ſeveral times in good Wine; and as often to draw off again by diſtillation the watry part, and to repeat theſe operations, till the Vinegar put in, diſtills as acid as when it was firſt made uſe of. But the following method is more ſhort and eaſy.

Put the Salt of Tartar into a large glaſs Cucurbit, and gently pour upon it as much Spirit of Vinegar as the Salt can ſuck up, ſo that the Salt and the Spirit may find themſelves reciprocally penetrated and ſatiated one by another, and that there be no effervency in the ſubſtances. For by this means you ſhall do more at one, then you could do at ſeveral times; ſo that the Salt of Tartar and the acid of Vinegar being intimately united, you may eaſily evaporate ſome portion of the watry part of the Spirit of Vinegar in a Sand-bath over a moderate fire, and you ſhall find at the bottom of the Cucurbit a black ſubſtance, the ſame that would have appear'd after all the repeated operations before mention'd. Then letting the ſubſtance cool, you ſhall diſſolve it in good Spirit of Wine, and having paſs'd it through a ſheet of grey paper, put it into a Cucurbit, or into a glaz'd earthen Pipkin, and evaporate the Spirit in a Bath of Aſhes or Sand, over a very gentle fire, till the ſubſtance be fully dry'd. Then diſſolve it again and having refilter'd it, evaporate this Spirit, as you did the former. Renew all theſe operations ſtill, till you find the ſubſtance white, dry, and in diſtinct leaves at the bottom of the veſſel; which is the reaſon that ſome Authors have given it the name of Salt of *Tartar Foliated*, or Foliated earth of Tartar.

Salt of Tartar charg'd with the acid of Vinegar, partakes much of the virtues of Tartar vitrioliz'd. But the addition of the Spirit of wine makes ſome alteration. For as the acid exceeding the volatile Sulphur, was the cauſe of the changing of Wine into Vinegar, ſo the volatile Sulphur of wine here added, qualifies the eagerneſs of the acid of the Vinegar, and changes the nature of the compoſition, whence ariſes a new effect and a virtue altogether particular.

In the mean time take notice that in the union of the acid of Vinegar with the Salt of Tartar, there is a precipitation of the latter terreſtrial part of the ſame Salt, which would be otherwiſe almoſt inſeparable; and that in the diſſolutions, and filtrations made with the Spirit of wine it remains in the filter, and the maſs becomes perfectly cleans'd from all impurity.

You may diſſolve this Salt in ſome Cordial water, and having Cryſtalliz'd it and dry'd it by the ordinary ways, keep it in a double glaſs bottle well ſtopp'd; or put it up, when you have reduc'd it into leaves; or ſet it in a damp Cellar, and thereby diſſolve it into a kind of purple colour'd liquor.

This Salt is of a middle nature between fix'd and volatile. It is moderately hot, and very proper to purify the maſs of the blood; and to purge gently Tartarous humours,

humours, which are the cauſe of ſeveral obſtinate diſtempers. It is giv'n from five or ſix, to eight or ten grains; or elſe altogether as many drops, when diſſolv'd, either in broth, or in any other proper decoction. You may make uſe of this Salt to penetrate and open ſeveral Mineralls, and to extract Tinctures, eſpecially from Iron, adding Spirit of Wine, or ſome other Menſtruum.

CHAP. LXIX.

Of the volatile Salt of Tartar.

SAlt of Tartar being naturally volatile, there is no great ſtudy to be us'd to change its nature, rather we muſt take care to hinder the acid part of Tartar from fixing the volatile; or elſe find out means to ſeparate them, when they are united and fix'd together. The Ancients and moſt part of the Moderns, not knowing the great inclination which the volatile and fix'd Salts have to join with acids, nor the indiſſolubility of their union when contracted together: we need not wonder at their ill ſucceſs, in ſearching after this volatile Salt; and that the greateſt part of Authors have rather choſen to ſuppreſs it, and thereby tacitly to teſtify that it was not within their knowledg, then to manifeſt how ill they had improv'd their time and pains, being not able to write any thing of certainty in this particular.

Certain it is that the acid and volatile Salts which are naturally found in Tartar, are not to be ſeparated one from another, but with great difficulty; but that they are always inclin'd to unite themſelves as ſtrictly as it is poſſible together; eſpecially in Calcination, which diſſipates the watry part, that ſenſibly divided and ſeparated their parts and manifeſtly cloſes up the terreſtrial part, which ſerves as a means to their union. And though that by this violent fire which conſumes the watry part, the acid ſuffer a notable diminution, yet there is enough behind to maintain the union, which they contracted, while they acted one upon the other, during Calcination. So that to break this union, by ſeparating or ſurmounting the acid which remains, and keeps the volatile within its parts after Calcination, ſome of the Moderns make uſe of a new acid, to unite it ſelf to that fix'd Salt. And that with very great reaſon: for the Salt of Tartar having loſt in Calcination much of the acid parts which ſtopp'd it; and there being only enough remaining to preſerve the quality of fix'd; the moſt fix'd part of this Salt, finds it ſelf half ſtarv'd for want of acid, (which happens naturally to all fix'd Salts) whence it comes to paſs that ſwiftly uniting it ſelf to this new acid, whoſe parts are ready to fill all the vacancies which the action of the fire had left empty, This new union is the cauſe that the more volatile part of the Salt of Tartar reſumes its natural liberty and volatility, and ſoon makes it ſelf manifeſt by its ſmell, and by all the marks Eſſential to volatile Salts. Which is not to be wonder'd at, ſince that to reſtore to the volatile Salts of Animals the volatility which the acids have ſuppreſs'd in fixing them, we have recourſe to the fix'd Salts, which are only able to force the acid Salts to abandon the volatiles, to unite themſelves to them: whence it comes to paſs, that theſe volatiles diſingage themſelves, and appear withall the qualities of which they are capable.

The moderns direct, that after you have calcin'd to blackneſs two or three pound of raw Tartar, and put them into a great Iron pot, to pour common water into it, about a fingers breadth above the ſubſtances; afterwards to ſet the pot over a very gentle fire, and when the ſubſtances are well ſoak'd and only lukewarm, to ſtrow thereby degrees about half a handful of raw Tartar finely powder'd; ſo that you ſhall perceive ſeveral bubbles to riſe upon the liquors. Then continuing to ſtrew new pouder of Tartar by degrees, and from time to time upon the liquor, the Fermentation will encreaſe, the bubbles grow bigger and multiply, and heap together, like

cluſters of Grapes. In the mean time you are ſo to manage the fire, ſo that it may not exceed in heat thoſe that are generally us'd for Fermentations, and to ſtrow your powder very moderately, and not to ſtrow too much at a time, for fear the ſubſtances boil over the ſides of the veſſel; and not to caſt in any more pouder when the ebullition ceaſes. After which, this liquor is to be put into a Cucurbit of Iron very large and very high, which being cover'd with its head well luted, with a Recipient well fitted and luted on, diſtillation is to be made in a Sand-bath over a very moderate fire, eſpecially at the beginning, applying from time to time cold wet cloaths about the Cucurbit to ſuppreſs the boiling of the liquor: at length you muſt augment the fire to cauſe the volatile Salt to aſcend, and rectify the diſtill'd liquor as much as is neceſſary for the ſeparation of the Salt, and to have it in all its beauty and purity. Theſe writers aſſure us, that this Fermentation makes ſo entire a diviſion of the parts, as well of the raw Tartar, as of the Calcin'd, that after diſtillation, there is not to be found in the Sediment any Salt at all either volatile or fix'd.

The raw Tartar and the Salt of Tartar calcin'd, proceeding from the ſame ſubſtance, and being of the ſame nature in their original, it is a difficult thing to determine which of the two volatizes ſooneſt in Fermentation, eſpecially aſcending in great quantity, and none remaining among the ſediment, as theſe writers believe. But my thoughts are, that in this confuſion into which the fermentation puts the parts, to diſpoſe them to ſeparation, the acid of the Tartar fails not to unite it ſelf to as much of the fix'd Tartar as it can compaſs, and that the portion of Salt which is united to it, is no more troubl'd to preſerve its union, then that which ſeparating from the juice of grapes in Fermentation, creates the principal parts of the ſubſtance of Tartar.

The Salt of Tartar may be alſo volatiz'd by means of the black diſtill'd oil of Tartar; of which you may take one part, and having incorporated it with twice as much of its weight of purified Salt of Tartar, put this maſs into a glaſs Cornute; and having exactly ſtopp'd it, and ſet it five or ſix months over a Bakers oven, or in any other place, moderately hot, open the mouth of the Cornute, and joyning to its beak a great Recipient carefully luted, you may draw forth in a Bath of Sand with a gradual fire a volatile Salt ſmelling like urine, white, Cryſtalline, and of a very penetrating ſcent, accompani'd with a ſmall quantity of the ſame Salt, which is found diſſolv'd into liquor, mingl'd with ſome little oil, almoſt as penetrating as the Salt it ſelf.

Now though we may ſay that the oil of Tartar contains in it much of the volatile Salt, as do ſeveral other oils, and that the volatile Salt which we draw out of it may proceed from it; nevertheleſs there is great likelihood that the Salt of Tartar affords the greateſt part of it; becauſe the volatile Salt aſcends in very great quantity, becauſe you have more then you put in oil; and becauſe there remains nothing but an oily coal, repreſenting chiefly the feces of the oil, and weighing much leſs then the Salt of Tartar made uſe of. I am of opinion alſo that the great digeſtion having made an opening and diviſion even to the ſmalleſt particles of thoſe two ſubſtances, and brok'n the particular union of the Salt Tartar, with ſome portion of the acid, and ſome particles of earth, like to that which the oil had made with ſome part of the volatile Salt, and having alſo diſorder'd all their parts and giv'n them another ſcituation in their new union, it is eaſy then for the volatile Salt, and the moſt pure part of the oil to manifeſt themſelves with all their qualities, and to quit theſe chains that have now no longer power to ſtop them. To which we may add that the ſecret ferment of the volatile Salt conceal'd in the oil of Tartar, having had time ſufficient to raiſe and increaſe it ſelf, has not only gain'd the upper hand of the acid part, but has in ſome meaſure converted it into its own proper ſubſtance, taking advantage of the conjunction of the oil of Tartar, upon which the acids have no power, not being able to unite when they are alone, and to which they cannot unite but by means of the Salts: conſidering alſo that the acids not being able without great difficulty to break the union which the Salts eaſily make with the oils, are inforc'd to change figure, and to conform to the nature of Salts, to the end they may ſhare in the union which the ſame Salts have contracted with the oils.

The uſe of Allum, which ſome of our Moderns employ for the volatizing of Salt Tartar,

Tartar, deſerves to have its place here, notwithſtanding ſome little diſputes may ariſe, touching the diverſity of the ſubſtance of Sal Tartar from that of Allum; wherein the ſcrupulous will ſoon be ſatisfy'd, if they conſider, that Allum yeilds nothing of evil or prejudicial, in diſtillation; and that the ſpiritous water thereof is us'd with ſucceſs, given inwardly in diſeaſes of the mouth and throat. The Moderns uſe this method.

They mingle three pound of Sal Tartar, very dry and well purify'd, with the full weight of raw Allum in powder; and having put them into a great Earthen Cornute well luted about, and plac'd it in a cloſe Furnace of Reverberation, they diſtill it with a gradual fire, ſoft at firſt, but at laſt increas'd to the utmoſt violence of heat; by which means, when the Veſſels are cold, you ſhall find in the Recipient very much volatile Salt of Tartar, the ſcent and taſte whereof will be very keen and penetrating; and the ſpiritous water of Allum mix'd with it; which you muſt rectifie by the ordinary way, to have the volatile Salt in its purity and perfection.

The ſame modern Writers, to take away all objections againſt the watry and ſpiritous parts of the Allum, which riſe with thoſe parts that aſcend from the Salt of Tartar in diſtillation, direct inſtead of raw Allum, only to make uſe of its *Caput Mortuum*, which after you have beaten and mix'd with an equal weight of Salt of Tartar, well dry'd and in powder, you may draw forth the volatile Salt by a Cornute, doing as you did with the raw Allum.

The Acid contain'd in Allum, is ſo weak and inconſiderable, that there is very little reaſon to attribute to it the volatilization of Salt of Tartar, but rather to its fix'd part that remains after diſtillation; conſidering that according to the opinion of the moderns, it produces this effect without any participation with the Acid. As to the reaſons of the volatilization of this Salt by the means of Allum, my Opinion is, that the terreſtrial Salt of the latter, being mix'd with the Salt of Tartar, meeting there the remainder of the Acid which had fix'd this Salt, and finding it ſelf more porous and more dry then it, ſucks it up, or at leaſt diminiſhes it in ſuch ſort, that not being able to retain ſo large a quantity in its pores, it forſakes the greateſt part, which being at liberty, becomes volatile as it was naturally.

I have ſaid in another place, that the moſt acid ſubſtance of the juice of the Grape, unites it ſelf with a good part of the volatile Salt for the compoſition of Tartar; and that the Lee that lies at the bottom of the Casks, abounding in volatile Salt and ſulphury Spirit, contains but very little acid, which would not be enough to fix but very little of the volatile. For which reaſons it is, that the volatile Salt may be eaſily drawn from this Lee; and that there is no need of borrowing forreign aſſiſtance for that purpoſe. To which intent, having ſeparated by filtration and expreſſion the Wine which accompanies the more thick part of the Lee, where the volatile Salt lies hid in the terreſtrial part; and having diſtill'd this Wine to make advantage of its volatile and inflammable Spirit, dry the thick part very well in the Sun, or over a Bakers Oven; and having pulveriz'd it, ſprinkle it with its proper Spirit, or ſome other well rectify'd, and having moderately moiſtned it, let the whole maſs dry of it ſelf, where you dry'd it before; then fill with it two thirds of a large Cornute of Potters Earth, and having plac'd it in a cloſe Furnace of Reverberation, and fitted and well luted to its beak a large Recipient, make diſtillation; beginning with a gentle fire, increaſing it by degrees for ten or twelve hours to the utmoſt violence. After which, the Veſſels being cold and unluted, you ſhall find in the Recipient the volatile Salt of Tartar mingl'd with the oily part, and much flegm, which you muſt empty both together into a large Matras with a long neck, and having plac'd it in a Sand-bath, cover'd with its head well luted, with a Recipient luted to it as exactly, make rectification with a moderate fire, uſing the ſame method as for the rectification of other volatile Salts; you ſhall then perceive, that the volatile Salt of the Tartar mounting firſt, will ſtick to the inſide of the head in a white and cryſtalline form; whence it muſt be ſeparated with as much art as celerity, to hinder as much as may be its ſeparation and mixture with the oily part, which will follow next to this volatile Salt, and aſcend with the Flegm, that will have diſſolv'd and carry'd with it the reſt of this volatile Salt.

The ſprinkling of the Spirit of Wine, well rectify'd, upon the dry Lee, is not ſo

abſolutely neceſſary, that the volatile Salt cannot be drawn out, but by the help of this Spirit. But there is this advantage in it, that by embracing ſome part of the acid of the Lee, and taking it along with it in its diſſipation, it frees the volatile Salt, ſo that you have it in greater quantity by that means, then otherwiſe you could do.

The volatile Salt of Tartar is very proper to purifie the maſs of the blood, and to expel through the pores fuliginous and ſharp humours; to mortifie acids, and prevent fermentation; and to cauſe thoſe humours to tranſpire, or elſe to carry them off by ſiege or urine. It may be ſucceſsfully us'd for the cure of intermitting Agues, eſpecially the Quartane; for the cure of Dropſies, Jaundiſe, Cachexies, Scurvy, and the moſt part of Chronical diſeaſes of men and women. It muſt be taken a good while before meals, from ten or twelve grains, to twenty or thirty, in convenient liquors, or in Bolus mix'd with Conſerves, or other medicines. It is very ſpecifick to Gangrenes, taken inwardly, or apply'd to the Gangrene it ſelf. It is recommended for the diſſolution of ſeveral Minerals.

I might have here inſerted other preparations of volatile Salt of Tartar; but I think I have given enough. Beſides that I am very well aſſur'd, that the latter is no way inferiour either for its truth or eaſineſs of preparation, to any that can be added to it.

As to what remains, the examples which I have given of volatile, white, and cryſtalline Salts, which may be extracted according to my method, not only from the Lees of Wine and dry'd Beans, but alſo from any other Pulſe, and many antiſcorbutick Plants, may ſerve to rectifie the errors of thoſe, who have thought that to be true which *Zwelfer* has maintain'd in his fifteenth Claſſis, and his 688 page of his Royal Pharmacopœa, printed at *Dordreckt* in the year 1672; where after ſeveral diſcourſes tending to the ſame end, he concludes in theſe words, *Quare vero verius comprobatum manet*, &c. *Wherefore it remains a Maxim truer then Truth it ſelf, That no ſubſtantial exiſting volatile Salt, can by Art be extracted from Vegetals, as from Animals it is every day done; only a fix'd Salt; and not that neither, unleſs incineration precede.* For the experience and trials which I have made of thoſe things which I have preferr'd, will utterly overthrow all his aſſertions; and at the ſame time deſtroy all the pretended reaſons which he has brought to uphold his opinion. For though it be a difficult thing to believe, that ſuch a perſon as he, who has been accounted learned and experimented in his Art, ſhould be deceived in matters that may be thought to paſs ſo frequently through his hands; nevertheleſs it appears to be true, that he has not made ſufficient reflections upon what he has put to the Preſs; and that he would not have been ſo poſitive in his aſſertion, had he to the bottom examin'd the nature of theſe very things whereof he has treated. Otherwiſe he might have had this, among other conſiderations, that Soot, which is ſcarcely compos'd of any thing elſe but the Salt and oily parts of the wood, which the violent operation of the fire has carry'd up and fix'd to the ſides of the Chimney, affords in diſtillation by a Retort, very much volatile Salt, which cannot be accounted other then a real volatile Salt of Vegetals. And it is a convincing proof, that this Author forgot himſelf upon this argument; in regard that he falls into a manifeſt contradiction, in the ſame Claſſis, p. 19. where he undertakes, contrary to his declar'd judgment, to ſet down a method how to prepare a volatile Salt of Tartar, which all the world knows to be one part of a Vegetal. Though his method, very troubleſome as it is, only tends to unite the fix'd Salt of Tartar with the moſt ſubtle acid Salt of the air, which he pretends to join together; and that all which he draws from thence comes nothing near to the virtues of the true Salt of Tartar, of which I have ſhew'd you the preparation.

CHAP.

CHAP. LXX.

Of Oily Volatile Salt.

THE high praiſes which *Silvius*, a Phyſitian of *Leyden*, has given to oily volatile Salt, and the frequent uſe which he made of it in the cure of ſeveral diſeaſes, having rais'd in many perſons a deſire to know the preparation of it, may give them an occaſion to complain of this learned man, in regard that having communicated to publick view ſo many excellent writings, yet he omits to impart a receipt, of which he makes ſuch frequent mention therein. Nevertheleſs it was the judgment of ſome, that the conſideration of thoſe diſtempers for which he made uſe of it, and the examination of other remedies which he preſcrib'd for the ſame, or for diſeaſes of the ſame nature, might give ſome inſight to underſtand what this preparation ſhould be, and that it might be infallibly found out, by making a proportional union of oily ſubſtances with ſpiritous and ſalt volatiles. To which purpoſe ſome there are who having incorporated certain drops of diſtill'd Oils with fine powder'd Sugar, diſſolve them in ſpiritous Aromatick waters; afterwards mixing therewith ſome volatile Salt of Animals or Vegetals. Others believe they reach the intention of *Sylvius*, by diſſolving ſome portion of volatile Salt in the ſpiritous and oily water of Marjoram, Lavender, or ſome other Plant, odoriferous and containing a certain Oil in it. Others mix the oily Spirits of Aromaticks with the volatile Salts, or their ſalt Spirits, which are nothing elſe but the ſame Salts diſſolv'd in ſome portion of Flegm. But to know the proportion of the ſeveral ſubſtances that compoſe an oily volatile Salt, I cannot direct you better then by imparting the receipt which *Monſieur Telingius*, Phyſick-Profeſſor at *Ryntel*, has communicated to us, in his Book enituled, *Prodromus Praxeos Chymiatricæ*, printed at *Ryntel* in the year 1674, where you may find it, page 342.

Take, ſaith he, an ounce of Aromatick Spirit, (whereof he gives you afterwards the receipt) two drams of volatile Salt Armoniack, and ſix drops of tincture of Cloves; and having mingl'd them well in a Bottle, and ſtop'd them well, let the mixture ſtand all night, and then ſeparate by inclination the clear liquor from the powder, that will be precipitated to the bottom; by which means you ſhall have a volatile oily Salt, or an Aromatick Spirit charg'd with a volatile Salt, or a volatile Salt temper'd of a pleaſing ſmell and taſte; which by reaſon of the fineneſs of its parts, is very proper to attenuate and diſcuſs bad humours, and to expel them through the pores. It is us'd with ſucceſs in all ſorts of cold diſtempers, eſpecially thoſe that proceed from ſome acid juice or ferment, whoſe boiling and the effects thereof it prevents. The doſe is from five drops to ten, in proper diſtill'd water.

The Receipt of his Aromatical Spirit is this:

Take two ounces of good Cinnamon, one ounce and a half of red Roſes, ſix drams of Anniſeſeed, and as much Fennel-ſeed; half an ounce of Galanga-root, as much Cloves, two drams of Cardamum, as much of the ſeed of Barberries, two ſcruples of Santal Citron, as much Nutmegs, and as much of Cubebs; bruiſe the ingredients, all but the Roſes, and having mix'd them, and put them all together into a glaſs Cucurbit, and pour'd upon them ſix pints of good Spirit of Wine, and one pint of Rain-water, cover the Cucurbit with its head well luted; then place the Cucurbit in a Sand-bath, and having fitted a Recipient to the beak of the head, digeſt the ingredients over a very ſlack fire for four and twenty hours, and then diſtill them, obſerving the ſame method as for the Spirits of all ſorts of Aromaticks. This Spirit heats, attenuates, and dries; fortifies the heart and ſtomach, and is proper in all ſorts of cold diſeaſes.

The different ſubſtances of the Spices made uſe of in this Aromatick Spirit, might ſeem to require different macerations. But conſidering, that the moſt ſubtle parts of the Aromaticks eaſily ſeparate from the groſſer, the contuſion, the four and twenty hours digeſtion, and the penetration of the Spirit of Wine, are enough to remove all ſcruples in this particular.

John Howells The

John Howells His Hand and Pen 8th August 1753

The Second Book:

Containing the

CHYMICAL PREPARATIONS OF

ANIMALS.

CHAP. I.

Of Medicines extracted out of the Body of Man.

VEgetals, the preparations whereof were the ſubject of the preceeding Book, are not the only things which God has created for the ſervice of Man; for He has not only ordain'd for him in ſeveral Animals, a good part of that which is neceſſary and proper for human ſuſtenance; but He has furniſh'd him with the means and art to extract out of every one of them in particular, ſeveral excellent remedies; and not only ſo, but he has given to man a peculiar knowledg of many other medicines contain'd in his own Body in his life time, and in the Bodies of other men after their deaths, far ſuperior to thoſe that are comprehended in the bodies of any other creature whatſoever. So that Chymiſtry need not want work, while buſied in thoſe copious Preparations which include not only the Scull, and other Bones of Men, the Blood, the Fat, the Fleſh, and Mummy, which is the Body embalm'd and dry'd, but alſo the Nails, the Hair, the Urine, and other Excrements, even to the very Secondines of Women. So that it may be ſaid, that there is not any part or excrement, no ſuperfluity in Man or Woman, which Chymiſtry cannot prepare for the cure or eaſe of the moſt diſeaſes and pains to which both are ſubject.

Artiſts extract from the parts of Man and Animals, ſubſtances not much unlike to thoſe of Plants though not in the ſame proportion; for Animals have leſs of Earth, leſs of Acid, and much more volatile Salt then they. Animals have alſo much more Oil then ſome, and leſs then others. The little Acid which is contain'd in Animals, and conſequently the want of power to put a ſtop to more then ſome ſmall quantity of the volatile Salt that very much abounds in quantity, is the reaſon that we muſt not wonder that when there is nothing to hinder it from abandoning the other ſubſtances, there ſhould be ſo little trouble to ſeparate it, and to make it come forth in the firſt place into the Recipient, then to aſcend from the bottom of a Matras with a long neck to the top of the head in rectification, as will happen in the making of the preparation.

As to what concerns the Oil, being of it ſelf volatile enough, and participating very

very much of the nature, and alſo of the proper ſubſtance of this Salt, it ſo falls out that the oil follows next as well in rectification as in diſtillation. I ſay moreover that though there be Animals which eat one another for their nouriſhment, and that man himſelf, lives in part upon the fleſh of ſeveral Animals, yet we muſt look upon the Plants as the moſt conſiderable, and principal nouriſhment of the moſt part of Animals, eſpecially of thoſe that ſerve for the food of men; and believe that it is from the volatile Salt of the plants, that the moſt part of Animals, eſpecially men, receive theirs. We are alſo to believe that the quality and quantity of the volatile Salt of Animals proceeds from the exaltation which the natural heat of the ſtomach makes of the ſubſtances which ſerve for their nouriſhment; and that this volatility is abſolutely neceſſary for them,to the end they may be quickly and equally, as they are, convey'd to the remote parts from the ſtomach, as well as to thoſe which are near it. Nor is there any doubt but that the principal parts of man, are abundantly furniſh'd with volatile Salt, in regard that not only the parts that are without ſenſe, as the Nailes and Hair, but alſo the moſt vile excrements of the body contain in them a very conſiderable quantity.

CHAP. II.

Of the preparation of Mans Scull.

I Cannot well approve Uſtion or Calcination of a mans ſcull, nor the magiſtery which ſome Authors direct us to make of it; in regard it cannot be burnt or calcin'd without diſſipating the beſt parts, nor reduc'd into a Magiſtery without depraving the virtues of it. And therefore I will not trouble my ſelf to ſet down the deſcription of it, being abſolutely of opinion, that it would be much better to raſp the ſcull and make it into powder, according to the Galenick method, then to uſe other deſtructive means, ſo far from the true preparation of ſo good a remedy; it being impoſſible for a calcin'd ſcull to have any other conſiderable virtue, but only to mortify or ſuck up certain acids.

The beſt Chymical preparation that can be made of a mans ſcull, is that of its diſtillation. For which purpoſe having got two or three ſculls of men hang'd or put to ſome other violent death in a healthy condition of body, bruiſe or ſaw them into ſmall pieces, and put them into a Cornute of Potters-earth very well luted, never minding whether it be more or leſs full,in regard the diſtillation may be equally made, provided the reſt of the operation be regular. Place this Cornute in a cloſe Furnace of Reverberation, and having cover'd it with its Duomo, and lighted in the aſhes hole a ſoft Charcoal fire, ſhut the Regiſter of the Duomo, the door of the fire-place, and that of the hole for the aſhes almoſt quite cloſe, and keep an equal ſoft fire for two hours, or till you perceive the Duomo to be never ſo little hot: at which time remove the fire out of the Aſhes-hole into the fire place; and having increas'd it a little, fit a large Recipient to the beak of the Retort, luting the cloſures very carefully, and giving ſometime after never ſo little air to the Regiſter of the Duomo, and ſo continue the ſame fire for two hours, or till the Flegm begin to diſtill into the Recipient. Then giving a little more air, and increaſing the fire one degree hotter, you ſhall perceive the volatile Salt Spirits accompany'd with the oil to come forth out of the Cornute in whiteClouds.Then keeping an equal fire for two hours longer, increaſe it one degree of heat more, opening the Regiſter of the Duomo more and more by proportional Intervalls; till at length having ſet it quite open, and augmented the fire to the utmoſt degree of heat, continue it ſo till no more Clouds coming out of the Retort, the Recipient is become altogether tranſparently clear. At which time let the Veſſels cool, and then unluting them you ſhall find the Oil, and the Spiritous Salt and volatile part of the ſcull together with much Flegm deſcended to the bottom of the Recipient. Of which ſeveral ſubſtances make a Rectification, by putting them together into a Matraſs with a long neck plac'd in a Sand-bath, and cover'd with its glaſs-head perfectly well luted, obſerving the ſame method as for the volatile Salts of Vegetals.

Some

Some there are that ſeparate the oil from the other ſubſtances before Rectification, filtring the two latter ſubſtances through a ſheet of courſe paper, upon which the oil ſtops, and which they reſerve alone for external uſes; not conſidering that this oil contains in it very much volatile Salt, that the qualities and vertues of it are almoſt the ſame with thoſe of the Salt, and may be employ'd for the ſame internal uſes, eſpecially being well rectify'd. Which is the reaſon that it is much better to leave it with the other ſubſtances in Rectification.

The ſame Authors thinking to rectify this volatile Salt the more exactly, give direction after the Salt and watry liquor is put into a Matraſs with a long neck, to pour upon them by little and little through a ſmall glaſs Funnel Spirit of Salt, till the Ebullition ceaſe; pretending, after they have filter'd and put the liquor into a glaſs Cucurbit cover'd with its head, and made the watry part to aſcend by a Sand-bath, to raiſe the volatile Salt to the head or to the ſides of the Cucurbit, being fix'd by the Spirit of Salt. But they have not well conſider'd of the action and reoperation of that acid Spirit with the volatile Salt; nor did they foreſee that being by that reciprocally fix'd, the volatile Salt is no more in a condition to raiſe it ſelf. Conſidering that by their own confeſſion, they cannot after that effect what they aim at, but by adding and uniting to thoſe Salts ſo mingl'd, double their weight of Salt of Tartar, or ſome other Alkali of the ſame Nature, which by uniting it ſelf to the acid may give the Salt it's former liberty.

All Authors who have wrote of the ſcull of man, ſimply prepar'd, have highly recommended it for the cure of all diſeaſes of the brain, and particularly of the Apoplexy and epilepſy. But the oil and volatile Salt of the Scull, being not only freed from their earthy and watry part, but highly purify'd by Diſtillation and Rectification, are capable of producing effects incomparably more powerful, of which the ſmartneſs and penetration of their ſavour and ſmell are unqueſtionable marks. Beſides, we are to underſtand that the heat of the ſtomach cauſes them to paſs with as much eaſe as ſwiftneſs, not only to the brain, but to all the moſt remote parts of the body. The oil as well as the Salt may be both taken inwardly. But the Salt is to be preferr'd, becauſe it is a little more volatile, more pure, more ſightly, and leſs diſpleaſing to the taſt and ſmell. The doſe is from ſix, eight, and ten grains, to twenty and thirty in ſome water, decoction, Conſerve or Cephalick Opiate. The doſe of the Oil rectifi'd is from two or three drops to eight or ten, in ſome liquors, Conſerves or Opiates. But it muſt be incorporated firſt with fine pouder Sugar, if you intend to unite it well with thoſe liquors. You may alſo uſe it to anoint the Temples, or the ſutures of the ſcull, or put it up into the Noſtrlils.

Subſtances very much like to thoſe which are extracted from the ſcull of Man, may be drawn out of all the bones, obſerving the ſame method in their diſtillation.

You may alſo prepare an Extract or an Eſſence of the ſcull of Man, according to the following direction. After you have raſp'd very ſmall ſome pieces of the ſcull, put them into a Matraſs, and pour'd upon them Cephalick Magiſtrial Spirit of Wine, as I have order'd it in the laſt part of this *Pharmacopœa*, till it riſe four good fingers above the Pouder, ſtop the Matraſs carefully; and having ſet it to macerate for fifteen days over a Bakers oven, ſtrain and ſqueeze out the liquor ſtrongly in a Preſs, and then putting it into a Cucurbit with its head well luted, place the Cucurbit in *Balneo Mariæ*, and fitting a ſmall Recipient to the beak, draw forth the Spirit till the liquor have acquir'd the conſiſtency of Honey, then put up both the one and the other in proper veſſels.

Some make uſe of diſtill'd Vinegar for this Extraction, though it be very ill done, for it changes the nature of the volatile Salt of Mans ſcull by fixing it. Nor is there any fear but that the Spirit of Wine will ſufficiently penetrate the ſubſtance of the ſcull ſo raſp'd, without any need of Spirit of Vinegar, or any Corroſive, ſince we ſee that the juice and the moſt pure ſubſtance of Harts-horn eaſily diſſolve in the water, where you have boil'd the ſhavings, though more groſly raſp'd then the mans ſcull is wont to be.

This Eſſence or Extract is commended for the cure of the Epilepſy. It is giv'n in ſome Cephalick water from half a ſcruple to half a dram. You may alſo mingle with it, from half a ſcruple to a dram of the water drawn from the Extract.

CHAP. III.

Of the Chymical Preparation of Human Blood.

I Am not of their opinion, that the Blood of Man, gulp'd down warm as it runs out of the Veins, is a ſpecifick remedy againſt the Epilepſie. For beſides the deteſtation of ſuch a cruel Beverage, and that the Blood running from the perſon let blood, does not contain in it any part which is not like to thoſe of the Blood of the perſon which is to drink it; we are to believe, that the Blood, being once out of its proper Veſſels, alters extremely in an inſtant, how careful ſoever we might be to preſerve it in its natural condition; and that it would be ſo far from being conveigh'd into the Veins or Arteries, juſt as it was ſwallow'd, that it would change its nature in the ſtomach, and loſe both its colour and its natural conſiſtence. So that there is no reaſon to expect from it any other effect then what may be expected from ordinary food.

But by the way of diſtillation, and ſeparation of the pure parts of Human Blood, moſt effectual remedies may be prepar'd againſt the Epilepſie, and all diſeaſes of the Brain, and that by the following directions.

In the month of *May* take a conſiderable quantity of healthy young mens blood, let blood in that ſeaſon, who are not red hairs. Put this blood at the ſame time into one or more Cucurbits of Earth, of which three quarters muſt be empty, and having fitted to them their heads and their ſmall Recipients, draw off all the watry part in an Ember-Bath with a moderate fire, till that which remains in the Cucurbit be quite dry, but not burnt. To which purpoſe you muſt have great care of the fire, eſpecially at the end. Then having cool'd the Veſſels and put up the diſtill'd water, put into a great glaſs Cucurbit the dry blood in the other Cucurbits, and having ſet the Retort in a cloſe Furnace of Reverberation, and fitted and luted to it a large Recipient, make a new diſtillation with a gradual fire, ſoft at firſt, but afterwards very violent, and by that means you ſhall have a new water with the Oil, and the volatile Salt will preſently follow and accompany, iſſuing out of the Cucurbit in white Clouds, and diſſolving themſelves into the Recipient. Then letting the Veſſels cool, turn out all the ſubſtances in the Recipient into a Matras with a long neck, cover it with its head exactly luted; lute alſo a ſmall Recipient to the beak, and make a rectification in a Sand-bath with a moderate fire, according to my former directions for volatile Oils and Salts of Plants. This rectification may be alſo repeated, if you deſire a more exact purity.

There are ſome, who obſerving that the water drawn from blood, diſtill'd in a Cucurbit, is of no great virtue, only ſpread the blood upon ſeveral Plates, and let it dry in the Sun, or in ſome Stove as quick as they can, after which they diſtill it in a Retort the ordinary way.

All Writers extol the volatile Salt of Mans blood for the cure of the Epilepſie. *Helmont* alſo affirms, that the uſe of it cures perſons that are grown in years. It is alſo very effectual in all other diſeaſes of the brain. It purifies the maſs of the blood, eſpecially in Scorbuticks, making it fluid, and helping circulation. It is very proper to ſuppreſs and diſſipate vapours that riſe from the Stomach, Spleen, and other Bowels. It is no leſs effectual againſt the vapours of the Matrix; to contend with the malignity of Fevers, though contageous, as alſo for the cure of the Dropſie, and to eaſe the pains of the Gout. The virtues of this volatile Salt and rectify'd Oil, are very like to thoſe which are drawn from the Sculs of men. The rectify'd Oil is alſo made uſe of in external unction of thoſe that are troubl'd with the Gout and Rheumatiſms, and of great advantage againſt the Palſie.

The blood that flows from women after labour, is diſtill'd according to the ſame method.

I might here ſpeak of Tinctures, Extracts, and other Preparations of Mummy, which ſome Authors have ſet down and very highly commended. But I think that theſe two preparations of Human Blood, Mens Skulls are incomparably much better for all intents and purpoſes, being drawn from parts that have ſuffer'd no diſſipation, then ſuch whoſe operations muſt be upon ſubjects

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that have receiv'd great alterations by the injury of time, or the deceit of Men.

CHAP. IV.

Of the Diſtillation of Urine.

THE ſalt and ſmart taſte of mans Urine, and its ſtrong ſmell, eſpecially if it be kept awhile, make it manifeſt that all the parts of the Body out of which it was made, abound in volatile Salt, ſince there is ſo great a quantity in this excrement. We uſually make choice of the Urine of young men that drink Wine, as being to be preferr'd before that of any other perſons; but we proceed variouſly in the extraction of the volatile Salt. For we may putrifie Urine in Horſedung for thirty or forty days, the better to ſeparate its ſalt volatile parts. And then having pour'd out by inclination the liquor that ſwims above the ſediment, make the diſtillation in *Balneo Mariæ*; or in an Ember-bath, with a very moderate heat, and rectifie afterwards the diſtill'd liquor three or four times, making uſe of a Matras with a long neck for the laſt rectification of the Salt. But though this method may be very well follow'd, yet the noiſome ſmell which the Urine contracts in putrifying, and the long time this preparation takes up, have made ſome Writers to leave out putrefaction. For now they only evaporate the ſuperfluous moiſture of the Urine in a *Balneum Mariæ*, or a bath of Aſhes, over a very moderate fire, till it be become as thick as a Rob. Then they diſtill it in a Sand-bath, in a large high Cucurbit, cover'd with a head well luted, and a Recipient alſo luted to it in the ſame manner. Then they rectifie the diſtill'd liquor in the ſame Bath, in a long Matras, cover'd with its head carefully luted; and they draw from it a volatile white cryſtalline Salt, very penetrating, attended by a liquor almoſt as ſubtle and penetrating, which is only the overplus of the volatile Salt diſſolv'd into a ſmall parcel of Flegm, which they keep apart in double glaſs bottles perfectly well ſtopp'd.

The volatile Salt of Urine powerfully mortifies the acids that uſually raiſe the fermentations in our bodies, and are the cauſes of ſeveral diſeaſes. It is very much eſteem'd againſt all obſtructions of the Liver, Spleen, and Meſentery; to purifie the maſs of the blood, cure the Scurvy, Cachexies, Jaundiſe, and Hypocondriack diſeaſes. It is preſcrib'd with good ſucceſs in Lethargies, Apoplexies, Epilepſies, and Convulſions, as alſo in ſuffocations of the Matrix. It is highly commended againſt difficulty of making water, to diſſolve the Stone in the Reins and Bladder. The Salt of Urine alſo that diſtills like a Spirit, is us'd to extract the tincture of divers Stones, and of calcin'd Flints, and in this preparation it becomes blue. And this is aſcertain'd to be a ſpecifick remedy againſt the difficulty of making water, being given from a ſcruple to a dram in ſome proper liquor. The Salt of Urine is alſo ſteep'd and us'd in Liniments to aſſwage all ſorts of pains, eſpecially thoſe of the Gout and Rheumatiſms. The Salt of Urine is given from ten or twelve grains to twenty or thirty, in white Wine or ſome other liquor. It is alſo given againſt ſuffocations of the Matrix, to diſſipate the vapours that ariſe from the lower parts, and to ſurceaſe the ſymptoms that happen in diſeaſes of the head.

Mans Dung, to which ſome have given the name of Weſtern Civet, when being dry'd in the Sun it has loſt its ſmell, and acquir'd a good ſcent, does not want its virtues. For being diſtill'd in a Retort, with a gradual fire, it affords an Oil that is particularly recommended for the cure of ulcerated Eryſipela's, ſcald heads, and all manner of ſcurfs and ſcabs. It is alſo good to mortifie and kill Cancers, and to aſſwage the pains of the Gout, being apply'd to the part.

I might here recite the ſeveral diſtillations of the Fat, Hair, Nails, and many other parts and excrements of man; but that I fear to tire the Reader, conſidering that their preparations are not extraordinary, and that the inſtructions and examples which I have already given, together with thoſe which I ſhall mention in ſpeaking of other Animals may ſuffice, and ſatisfie them who have any knowledg of Chymiſtry.

CHAP. V.

Of the Diſtillation of the Viper.

THE diſtillation of Vipers is the beſt and moſt uſual preparation that Chymiſtry performs. All the parts of the body may be made uſe of, or only ſuch as you like beſt; conſidering that you extract out of all the ſame flegm, the ſame Oil, and the ſame volatile Salt. It is only better to dry in the ſhade thoſe parts which you intend to diſtill, then to put them into a Retort with all their moiſture; which would very much exceed that which uſually comes forth in the diſtillation of the dry ones. Take then the heads, the tails, the hearts, the livers, the truncks, the skin, and if you pleaſe the fat, the kidneys, and all the entrails of many Vipers, male or female, and having cut all their parts into ſmall pieces, fill a large Retort of glaſs or earth almoſt quite up to the top, well clos'd with lute, then having plac'd it in a Furnace of Reverberation cover'd with its Duomo, fitted a large Recipient to the beak of it, and ſhut up the Regiſter of the Duomo, and the door of the fire-place, kindle a gentle fire in the Cinder-place, and keep a fire for two hours, only to heat the Retort and the Furnace; then removing the fire into the hearth-place, keep the fire in the ſame heat for two hours longer, at the end whereof encreaſe the fire one degree, giving never ſo little air to the Regiſter of the Duomo; and having continu'd the fire ſo for two hours more, encreaſe the fire to the third degree for the ſame time. After which, having ſet the Regiſter of the Duomo wide open, give the fire its utmoſt violence of heat; and continue it ſo till nothing come out of the Cornute, and that all the vapours in the Recipient be converted and diſſolv'd in Salt or Liquor. At which time ceaſe diſtillation. Then let the Veſſels cool, and unlute the Recipient, and when the Salt is well diſſolv'd in the liquor, pour it out into a Matras with a long neck, and having plac'd it in a Sand-bath, and cover'd it with its head, and luted a ſmall Recipient to it, make rectification of it with a gentle fire, and you ſhall ſee the volatile Salt white and cryſtalline, mount to the top of the head, which is to be put up in a double glaſs Bottle carefully ſtopp'd, and continuing rectification, ſeparate and keep apart the Oil, and the reſt of the volatile Salt, diſſolv'd in ſome portion of the flegm, that dropt forth together into the ſmall Recipient, rejecting at laſt, that which lies at the bottom of the Matras, after you have caus'd all the volatile Salt and oily parts to aſcend.

As for that which remains in the Cornute after diſtillation of the Vipers, it may be eaſily perceiv'd by the volatile Salt and other ſubſtances drawn from thence, that there is nothing conſiderable remaining behind, and that the ſmall quantity of fix'd Salt which might be met with there, is not worth the trouble, and therefore it is better neither to imitate the Ancients nor the Moderns, who not underſtanding the extraordinary quantity of the volatile Salt of theſe Animals, thought to do wonders by making uſe of calcinations to extract forth a Salt, which the ſame calcination had diſſipated.

The ſpecifick quality of the volatile Salt of the Viper, to overcome the venom of the biting of the Viper, or of any other ſort of Serpents, and many other creatures, is not the only virtue it is endued with, as being a ſovereign remedy againſt the Peſtilence, the Meaſles, and the ſmall Pox, all ſorts of malignant Fevers, and epidemick diſtempers. It is an utter enemy to all putrefaction, curing Agues that are caus'd thereby, as are the moſt part of intermitting Agues; and mortifying the acids which it meets with, it is a wonderful ſpecifick againſt a Quartan Ague. There is not a medicine to be found more proper to purge the maſs of the blood, to give it its natural fluidneſs, and help circulation; whence it comes to paſs, that it is very proper to cure Scorbutick diſeaſes, and to cauſe the tranſpiration of thoſe ſharp and fuliginous humours that cauſe Scurfs, Scabs, Eryſipela's, Itches, ſcald heads, and all diſeaſes of the skin. It is alſo the moſt powerful remedy in nature for the cure of the Leproſie, the ſpots whereof are upon the back of the Viper, and ſeem to bear its ſignature. For it opens, penetrates, cuts, attenuates, expels thorough the pores, and drives to the very extremities of the body, the impurity that infects the maſs of the blood, and all the habit of it. It very much aſſiſts and fortifies nature,

ture, and diſpoſes her to perform all her functions as ſhe ought. For by the means and help of this Salt ſhe ſends neceſſary nouriſhment to all the parts of the body, as alſo to thoſe that are deprived of it by ſome accident, and expels by Urine, Stool, and other means, all the ill humours of the body. It opens all the paſſages of the head, and frees it from cold and viſcous flegm, that hinders the communication of the Spirits. So that it is of wonderful uſe in Lethargies, Apoplexies, Convulſions, Palſies, and other cold diſeaſes of the head. No leſs uſeful is it in ſwoonings, and palpitations of the heart, in Aſthma's, Pluriſies, new and old Coughs, and other maladies of the breaſt. It ſtrengthens the ſtomach, and helps digeſtion. It opens obſtructions of the Liver, Spleen, and all the bowels. It diſſolves coagulated blood, and prevents internal Apoſtemes, eſpecially at their firſt growing, as alſo external, being apply'd thereto, or elſe the Oil alone. In a word, there is hardly in all Phyſick a more univerſal medicine, or that can afford quicker or more effectual relief to any diſeaſe. The doſe and manner of uſing, both internal and external, are very much like to thoſe of the volatile Salt of mans Skull; and ſo it is with the Oil, whoſe virtues it very much imitates.

Now though the volatile Salt and Oil of Vipers drawn through a Retort, be the moſt eſſential part, and that there remains in the Cornute but only a little fix'd Salt, very deeply mix'd with the terreſtrial part of the Viper; yet they that deſire this fix'd Salt may compaſs it, if after they have powder'd that reſidence, which is as black as a coal, they put it upon a Tyle, or ſome other Veſſel in a Potters Oven, and there leave it till it be throughly calcin'd. For after that, by making a Lye, filtring it, and evaporating the moiſture, the fix'd Salt will appear at the bottom of the Veſſel, though but a very ſmall quantity, while the terreſtrial part, which is a real *Caput Mortuum*, remains behind in the filter. The virtues of this Salt are much inferiour to thoſe of the volatile, of which it neither has the ſmell, penetration, or ſavour. For it has a taſte like Lye, and leaves a kind of a biting tartneſs in the mouth, which the other does not; yet it may be mix'd among purgative and diuretick medicines.

As to the fixation of volatile Viper Salt, which has been attempted to have been done with acids, and among others with Spirit of Salt; though it be of no great neceſſity, yet it may be of ſome virtue and uſe upon ſome occaſions, and eſpecially for perſons who have loſt their taſte, and for want of acids, have wat'riſh and unſavoury reliſhes in their mouths. For though we may ſay, that the ſavour and ſhape of Salt thus fix'd very much reſembles Bay-ſalt, nevertheleſs it is not one and the ſame thing, for the volatile Salt, as much alter'd as it is to outward appearance, keeps its own nature entire, as appears by this, that mixing it with double its weight of Sal Tartar, or any other fix'd Salt, and putting them into any proper Veſſel, it ſublimes with its firſt force and purity, while the acid of the Spirit of Salt having quitted it, to unite it ſelf to the Tartar, remains at the bottom of the Veſſel with the ſame Salt, the little uſe of this volatile Salt of fix'd Viper, and the eaſineſs to fix it in a moment upon any occaſion, by mixing it with ſome acid, are the reaſons why I do not ſet down any particular preparations here. For it is enough only to pour upon this volatile Salt by degrees a ſmall quantity of Spirit of Salt, while it is diſſolv'd in its own flegm, and to continue affuſion, till the Ebullition ceaſe, and then to evaporate the ſuperfluous moiſture till it be as dry as Salt.

I omit ſeveral Salts, Eſſences, Extract, and Opiates of Vipers, with ſeveral other Chymical remedies of which Vipers are the foundation; fully believing that there is in the volatile Salt of Vipers a full collection to be had at all times in a ſhort abridgment of all that can be expected from the trouble of ſo many other preparations.

As to the conteſts that have happn'd touching the Vipers venome, which I attributed to only incens'd or inrag'd Spirits of that Animal; though I think I have explain'd my ſelf enough upon that ſubject, as well in my firſt, as in my ſecond book of Experiments upon the Viper: yet I cannot but ſpeak my thoughts upon what *Monſieur Denis* has utter'd in his *fix'd Memorial* of the Arts *and Sciences*, in reference to theſe two Treatiſes, immediately after I publiſh'd the laſt. For though he ſeem'd very earneſt to ſee my book, that he might make his reflections upon it, and ſeems to profeſs a great deal of ſincerity. Yet the Event makes it appear that he has neither conſider'd my book, or rather, not ſo much as read it, but out of a deſign to ſuppreſs what is moſt material in it: and to elude whatever he thought to the prejudice of *Monſieur Redi* who had wrote againſt my opinion.

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In ſhort this Author ſhews himſelf highly prejudic'd againſt me in favour of *Monſieur Redi*, to whom he gives the Title of firſt Phyſitian to the Duke of *Tuſcany*, to to give the honour of a borrow'd dignity. For not content to ſuppreſs the very Title of my very ſecond Book, he attributes to him all that I have writt'n againſt the paſſages of the Gall, through which the Ancients pretended that the yellow juice was convey'd to the Gums of the Viper; and ſhews his prejudice yet more, while he would ſet up that *Italian* Phyſitian for the Author or Inventer of the ſlimy kernells of the Viper. Though in his own writings he never talks but at random, and by conjecture of two ſlimy kernells only, which he imagines to be fix'd under the veſicles of the yellow juice, where there are no ſuch things. Whereas I have ſhewed in my firſt Book, by the exact deſcriptions which I have giv'n, and draughts which I have caus'd to be drawn to the life, that there are a great number of kernels cluſter'd as it were in a heap together behind the holes of the eyes, and upon the ſides of the Temples of the Creature, far from the bottom of the veſicles, and that *Monſieur Redi* is extreamly deceiv'd in his pretended diſcoveries, and that without doing me much injuſtice as M. *Denis* has done, he cannot deprive me of the advantage of having been the firſt inventor of thoſe kernells.

But it is evident that he had no other deſign in his Memoires, by maintaining the ſituation of the ſlimy kernells under the bottom of the veſicles, then to defend againſt all truth, the opinion of *Monſieur Redi*, concerning the pretended malignity of the yellow juice; for were he not wedded to the worſt party to the prejudice of experience, he needed nothing but his eyes to have undeceiv'd himſelf, and to have brought him to reaſon. Whence it appears, that it is meerly out of cunning when he ſays he is of my opinion touching the nature of the Gall, which is nothing to the controverſy, to inſinuate more dextrouſly that he is not of my opinion, as to the nature and qualities of the yellow juice; taking no notice of my convincing arguments, to juſtify that it is nothing venomous, nor of the experiments which I have publiſh'd, and which were try'd in publick, whereas *Monſieur Redi*'s are only particular and upon his own report.

But this is not all, for *Monſieur Denys* not content to ſuppreſs, as much as in him lies, whatever he obſerv'd in my laſt book diſadvantageous for *Monſieur Redi*, he goes about to betray truth it ſelf, and to father opinions upon me which I never ſo much as thought of. But not being able to do that fairly, he takes upon him to quarrel about Terms, pretending that when I ſpoke of enrag'd Spirits, I meant a ſubſtance purely ſpiritual, and that by the Idea of vengeance and anger, which I attributed to Vipers, I meant that thoſe creatures had paſſions like to thoſe which are rais'd in men, upon violent changes that happ'n in their Animal Spirits. But this trick takes little or no effect among rational men. For no man can think by my diſcourſes that I ever queſtion'd but that the venome of the Viper was a material ſubſtance, but that I thought it ſo fine and ſubtiliz'd, that not falling under the diſcernment of ſenſe, it might with reaſon be call'd Spiritual, or to ſay better Spiritous, to diſtinguiſh it from the yellow juice whoſe parts are diſcernable enough. So that by *enrag'd Spirits* I meant the moſt ſubtiliz'd and moſt agitated part of the humours, that unite together and ſeparate themſelves from the Maſs in that violence of action, through an extraordinary impreſſion which the objects make upon the body. And when I averr'd thoſe Spirits had no determinate place, when the Creature was unprovok'd; I thought it but rational, becauſe perhaps they might not be then in being, or if they were, they are ſo mix'd with the reſt of the humours that they have no particular place, but only when they unite from the reſt and aſcend to the brain when the Creature is provok'd. However had I not thought them local, I could never have affirm'd that they paſs from the throat of the Viper that bites into the blood of the other Animal, where it cauſes all that diſturbance which is remarkable.

But all men of judgment may eaſily underſtand that I made uſe of thoſe figurative ſpeeches, that I might the better clear my thoughts to the apprehenſion of all the world, intending by the word *Imagination* only the Organick part of the brain of that Animal, where theſe Spirits ſeparated from the reſt of the blood muſter themſelves up together. By the *Idea of Vengeance*, their flying to the Organs appropriated for their defence; and by *Choler*, the tumultuous and violent agitation wherewith thoſe little bodies paſs from one body to another. And when I ſaid that this venome looſes it ſelf when the anger of the Creature is over, I meant no other but that the violent motion of the humours ceaſing, they recover their

natural

natural condition, and ceasing to be enrag'd, are not able to separate themselves, to work those tragical effects which are the consequences of their commotion.

So that it is no wonder, that *Monsieur Denis* having suppress my real Experiments, should obtrude upon me such as never were in my thoughts to make or put down in writing, when he affirms it to be one of my observations, that in swallowing the blood of the Viper, or by pouring it into a wound, no unhappy accident fell out. But it may be observ'd that integrity is not the thing which he aims at in his writings, and that he rather chooses to vent whatever comes into his thoughts, then to trouble himself with the examination of truth. Had he only made a succinct repetition of what he found most remarkable in my experiments, and recited in short the reasons that confirm my opinion, as the Gentlemen of the Academy of *London* have done me the honour to do, he had done me but justice; but that was not his purpose; for to favour the part which he has chosen to defend, he has attributed to another that which belongs to me, and overturning the whole sense of my writings talks of that which is not material, with saying a word of that which was most conducing to knowledg. So that I have the same reason to give him the same rebuke as formerly *Martial* gave *Posthumus*, his Advocate, who instead of pleading his cause about the three Goates which his neighbour had stol'n from him, talk'd about the bush, of nothing but *Sylla* and the war of *Mithridates*. Since that instead of keeping close to the truth contain'd in my books, of which he undertook to speak, he has suppress them to speak of *Monsieur Redi*, and attributing that to him which was in truth mine he has alter'd the property of his friends writings, and drawn consequences quite contrary to the sence and meaning of the Author.

In the mean time neither the ill grounded opinions, nor irrational writings of any of Mr. *Redi*'s Copartners, shall ever make me change my opinion touching the Vipers venome lying in the enrag'd Spirits, excluding the yellow juice and all the rest of the parts of the body. The great number of trialls which I have made thereof, and my own reason, will not permit me to doubt any farther upon this subject, and more effectually convince me, then any other writings which they have publisht either before or since mine.

CHAP. VI

Of the Chymical preparation of Harts-horn.

THE great eagerness of the Hart to devour Vipers, whose parts are so subtle, his swiftness, his Annual renewing of his Head, and the great age which he lives, make it manifest that this Creature is endu'd with very considerable principles of life, and that consequently his parts must be very useful in Physick. We see that his body affords a good number of Medicines both to the one and the other Pharmacy; and that Chymistry finds work enough to exercise it self upon, especially in relation to the Horns, the various conditions whereof require variety of preparations. The first time proper for the preparation of these Hornes is from about the middle to the end of the Spring. For then it is that they abound in subtle and volatile parts, which not being able to afford sufficient nourishment to those of the preceeding year, loosen them from their place, and thrust out others in their stead, at the same time almost that the sap rising in the Spring up into the Trees, produces fresh leaves and fruits instead of the growth of the former year. The subtle and volatile parts abounding very much, thrust out in a short time small shootes, very tender at first, and indeed for some weeks, as being full of a Sanguinolent Juice; but which hard'n from day to day, growing bigger and bigger from the beginning of the Summer, till they have attain'd their full growth, and that their time comes to fall off again.

Take these young Shoots when they are about seven or eight Inches high, and having cut them into slices about the breadth of a half Crown put them into a glass Cucurbit

curbit, and ſet it in a *Balneum Mariæ*, and having luted a head and a Recipient to it, diſtill the liquor with a moderate fire, till the pieces are become dry. This is call'd Harts-head water; and is very much recommended for for the furthering of women in Travel. It is good alſo to fortify the heart and noble parts againſt malignant Fevers. You may make double advantage of the pieces that remain in the Cucurbit. For having beaten them to pouder, keep it apart, or put them into a Cornute of Earth, and having plac'd it upon a bed of Sand in a cloſe furnace of Reverberation. and fitted and luted a large Recipient to the beak, make the diſtillation with a gradual fire according to the rules. For by that means you ſhall have a volatile Salt, an oil and much Flegm, which is to be rectify'd afterwards in a Matraſs with a long neck, like the volatile Salt of Vipers. The water of Harts-head is to be tak'n at a diſtance from meals, from a ſpoonful to two. You may alſo at the ſame time add to the ſame doſe, a ſcruple or half a dram of the pouder, or from four to ſeven or eight grains of the volatile Salt.

Uſtion was the uſual preparation which the Antients practiz'd upon Harts-horn; and of which ſome of our Moderns make uſe, though to very little purpoſe, unleſs when the Terreſterial part is only deſir'd, and that you have no need of the oil or volatile Salt, which are diſſipated by Uſtion or Calcination. But though this be rather a deſtruction then a preparation, the neceſſity which there may be of the Terreſtrial part in ſeveral Rectifications, as alſo in that of its own volatile Salt, or elſe to ſerve as a remedy to bind and mortify Acids, occaſions me to ſay, that to have it in that Condition, after you have ſaw'd the horn in long peices, you may ſet them upon a Tile in ſome Potters oven, and there keep them while the Pots are bak'd, till they be calcin'd to whiteneſs. You may alſo calcine thoſe pieces in a cloſe Furnace of Reveration, putting them between the Cornute and the Duomo, and leaving them there during the diſtillation of ſome corroſive Spirits, eſpecially of Vitriol, which requires a long continuation of the fire. The Harts-horn being thus calcin'd, it is enough to pouder it groſly, if it be only for Rectifications. But if it be to be tak'n alone, or mix'd with other aſtringent remedies, it muſt be ground upon Porphyry, moiſtning it with ſome Cordial water, as you grind pretious Stones, till it be ſcarcely to be felt.

At this day we uſe another Calcination of Harts-horn much leſs deſtructive, which is call'd the Philoſophical way, by reaſon of the gentle and induſtrious men by which they bring it to perfection. To which purpoſe after the Harts-horn is ſaw'd into long peices, they tye every one of the peices at the end with a pack-thread, and faſten the pack-thread to a ſtick of a ſufficient length, and lay them a croſs within ſide of a large Refrigerant of Copper tinn'd within, ſo that the long peices of Harts-horn hanging down in the neck of the veſſel may for ſo long time as is requiſite, receive the vapours of the liquor boiling that aſcend from the veſſel, where Carduus, Scabious, Bawme, or any other Cordial plant is diſtilling. But becauſe the Harts-horn muſt receive theſe vapours for three or four days together to be throughly calcin'd, and the diſtillation of an herb cannot endure ſo long, it muſt be hung again over new diſtillations of the ſame nature.

Now the volatile Salt of the Harts-horn being inwardly and cloſely united with the other parts, and with them conſtituting a very ſolid body, the vapours of the boiling water cannot well make any great diſſipation: whence it comes to paſs that though they carry along with them the watry and muſcolaginous part, yet neither the oil, nor the volatile Salt ſuffer any conſiderable diſſipation ſo that there remains a very conſiderable quantity of both after Calcination thus order'd. So that it is incomparably better then that which is calcin'd by a violent and immediate fire; which conſuming all the volatile leaves only the Terreſtrial part, and that little Salt which the acid of the Combuſtible matters has fix'd.

This Harts-horn is as white and eaſily pouder'd as the firſt. It may be alſo ground in the ſame manner upon Porphyry, and ſerve for the ſame uſes from half a ſcruple to half a dram, and ſometimes a whole dram, mixing it in proper liquors, or among other Medicines, eſpecially if you deſign to cloſe up and ſtrengthen; to mortify acids; reſiſt poiſons, or kill worms.

Nevertheleſs we muſt believe that Harts-horn ſimply raſp'd, and pouder'd, not having paſs'd the fire, nor ſuffer'd any diſſipation of its good parts, is yet better then Harts-horn calcin'd Philoſophically, eſpecially if you have no deſign to qualify acids.

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As for Magiſteries of Harts-horn, which ſome Authors have deſcrib'd, in regard they are not made, but by diſſolving and precipitating it with corroſive Spirits and Salts, which by their violence deſtroy its beſt parts, I think it far better to let thoſe preparations alone, and to uſe in their ſtead, Harts-horn raſp'd, and finely powder'd.

The ſeparation of the moſt pure ſubſtances of Harts-horn from the impure, are the moſt advantageous preparations that can be made of it. For that purpoſe having ſaw'd it into ſmall pieces, diſtill it through a Cornute in a cloſe Reverberating Furnace, with a gradual fire, as in the diſtillation of mans Skull; in the ſame manner the diſtill'd ſubſtances may be rectify'd. But becauſe the volatile Salt is chiefly ſought for, beſides thoſe ways which I have preſcrib'd for the diſtillation of mans Scull, you may mix it with Harts-horn calcin'd and groſly powder'd, and ſo rectifie it three or four times; that leaving there behind all its impurities, and the ſmell of the Empyrema contracted in diſtillation, it may aſcend more pure and more white into the head, and be in a condition to be longer kept, in a double glaſs Bottle well ſtopp'd. The doſes and uſes of the volatile Salt and Oil of Harts-horn are the ſame with thoſe of mans Skull.

Harts-horn calcin'd, and very groſly powder'd, is properly made uſe of, in the diſtillation of Marrow and Suet of a Hart, or mans Fat, and all the unctuous parts of Animals, by melting thoſe ſubſtances over a gentle fire, and incorporating with it as much as that can ſuck up, and afterwards putting them into a Cornute, and diſtilling them in a cloſe Furnace of Reverberation, with a gradual fire, but much more violent then that which is us'd for the diſtillation of the ſame Harts-horn.

Pieces of Ivory may be diſtill'd through a Retort, in the ſame manner as Harts-horn, and a volatile Salt and Oil drawn out of it, the vertues whereof are very like thoſe of Harts-horn. Then yon ſhall find in the Retort the pieces of Ivory very black within and without, if the fire were to the laſt degree of heat. Thoſe pieces of Ivory the Painters make their true Velvet black, which they can never do of Ivory burnt in the fire; where the pieces are neither truly nor equally black, but of a mixt colour. You may alſo quench thoſe pieces of Ivory upon a Tyle, and put them and leave them in a Potters Oven, till they are calcin'd to a white colour, which is that which the Ancients call'd *Spode*, that being depriv'd of its volatile Salt and Oils, is of no more worth then Harts-horn calcin'd in an open fire. The reaſons which I have given for the blackneſs of woods diſtill'd through a Cornute, and why they cannot be turn'd to Aſhes, how violent ſoever or long continu'd the fire may be, while they are ſhut up and kept from the air, the ſame reaſons, I ſay may be given for the blackneſs of Ivory; to which I refer the curious Reader, to ſpare the trouble of a repetition.

Harts blood may be alſo diſtill'd after the ſame manner as mans blood. The ribs alſo and other bones of a Whale after the ſame manner as Harts-horn. The volatile Salt and Oil approaching very near to thoſe of the ſame parts of other Animals. Yet there are ſome Phyſicians who attribute to them a ſpecifick vertue for the eaſe and cure of the Gout, giving the Salt inwardly, and outwardly applying the Oil upon the parts aggriev'd.

CHAP. VII.

Of the Preparation of Toads.

TOads that ſeem to be abhorr'd and abominated by all mankind, have yet their vertues, which are very conſiderable. I omit the command which ſome pretend that the Toad has over the Weeſel, and the neceſſity which he impoſes upon that creature to put himſelf whether he will or no into his mouth, which the Toad opens on purpoſe to ſtifle the other. I meddle not neither with the Philoſophical diſcourſes of ſome upon the cunning of that creature in fighting with the Spider; only I muſt ſay, that beſides the good parts that Chymiſtry draws forth by diſtillation, the body of a Toad dry'd, is uſeful in the cure and eaſe of a good number of diſeaſes.

The drying of Toads is the firſt and moſt common preparation in uſe, as well for their Chymical diſtillation, as Galenical preſcription. And to this purpoſe, having ty'd a packthred to their hinder leg, and hang'd them up in an airy place, leave them there not only till they dye of themſelves, but till they are quite dry. Then if you intend to diſtill them Chymically, cut them in pieces, and put them into a Retort of Potters earth or glaſs, well luted, and place it in a cloſe Reverberating Furnace. Then having exactly luted a large Recipient to the beak, you ſhall draw forth with a gradual fire a volatile Salt with an Oil, together with much flegm, which will be all together in the Recipient; of which you muſt afterwards make a rectification in a Sand-bath with a moderate fire, in a Matras with a long neck cover'd with its head carefully luted, obſerving in all things the ſame method as for the rectification of the pure ſubſtances of the Viper. Whoſe vertues thoſe of the Toad are very like to, as alſo the doſe and uſes. Nevertheleſs the volatile Salt of Toads is particularly recommended for the cure of the Hydropical, eſpecially being mix'd with a little of that fix'd Salt, which may be drawn by ordinary ways from the ſediment in the Cornute after diſtillation.

The whole body of the Toad dry'd, and held under the arm-pits, in the hand, or behind the ear, or hung about the neck, is accounted a ſpecifick to ſtop bleeding at the noſe. It ſtays the menſtruums, or irregular loſſes of blood in women, being apply'd upon the Navel. The bone of the left leg before, which is call'd the Toads arm, held againſt the tooth, aſſwages the pain, according to *Van Helmont*, and the experience of ſome moderns. The powder of the whole Animal put upon Buboes, or peſtilential Carbuncles, draws forth the malignity, as it does alſo in Venereal ſhankers. It fetches out the water from the Dropſical, being laid to the reins, and given in White-wine from a ſcruple to half a dram. *Helmont* recommends very highly Amulets compos'd of the powder of a dry'd Toad, and the ſtuff which he diſgorges dying as he hangs, falling into a Cup of Wax ſet on purpoſe to receive it. Affirming that thoſe Amulets are ſpecificks as well to preſerve from, as to cure the Peſtilence.

Some Authors attribute all the vertues of a Toad to a Stone, or Bone, which is ſometimes found in the head of thoſe Animals, which are large and old, and is call'd a Toad-Stone.

CHAP. VIII.

Of the Preparation of Frogs.

FRogs not having any thing venomous in them, when they are cut to pieces, may be put into a glaſs Cucurbit, plac'd in *Balneo Mariæ*, and cover'd with its head; ſo with a ſoft heat you ſhall draw forth a water, accounted very proper to appeaſe internal pains, eſpecially of the Reins, Ureters, and Bladder. After which diſtillation, put that which remains in the Cucurbit into an earthen Retort, well luted; and having plac'd it in a cloſe Reverberating Furnace, and fitted a large Recipient to the beak, and exactly luted the jointures, make a diſtillation with a gradual fire, proceeding as in the diſtillation of Vipers, and you ſhall find a volatile Salt and Oil, mix'd with much flegm at the bottom of the Recipient; of this make a rectification according to the rules already given, and attribute to the Oil and volatile Salt, very near the ſame vertues as to that of Toads.

You may alſo burn the Frogs in a pot, and reduce them to Aſhes, to ſtop the bleeding of wounds, by ſtrewing it upon them; and bleeding at noſe, by putting it into the noſtrils. They are alſo mingl'd in medicines proper to make the hair grow. They are alſo giv'n inwardly from a ſcruple to a dram in proper liquor, to ſtop Gonorrhæa's, after the virulency is carry'd off.

Some Authors commend Toads eaten againſt the venom of Serpents. They apply them alſo alive upon peſtilential ſores to ſuck out the poiſon; they alſo attribute particular vertues to the heart, liver, gall, and fat, and ſome other parts of Frogs. But chiefly they eſteem their ſperm, gather'd in *March* in the full of the Moon,

Moon, and distill'd in *Balneo Mariæ* between lukewarm and boiling, which water they give inwardly in vomitings, losses of blood, internal inflammations, and outwardly apply it to cure redness of the face, and kill the Itch occasion'd by sharp acid Salt humours. *Crollius* makes use of it also for his powder call'd *Sperniola*; the water of Frogs distill'd without fire is highly commended for preserving the complexion of Ladies.

CHAP. IX.

Of the Distillation of River-Crabs.

THE refreshing and moistning quality of River Crabs rendring them highly extoll'd for restoring those that are Physical and those that are dry'd and wasted with lingring agues, and long sickness we endeavour to preserve their natural moisture by distilling them. For that reason we do not study to separate their volatile Salt, though they are not unfurnish'd with it, as may be seen by distilling them through a Cornute in a close Reverberatory, proceeding in the same manner as for the distillation of other Animals or their parts, and rectifying the distill'd substances in a Sand-bath in a Matras with a long neck.

The most ordinary distillation of Crevisses is this; having first bruis'd them well and put them into a glass Cucurbit, cover'd it with its head and well luted the jointures, place it in a Sand-bath over a gentle fire, and draw forth the water till the substances in the Cucurbit are almost dry; then letting the Bath cool and unluting the head, pour out the distill'd water upon the sediment, and luting up the Cucurbit renew the distillation as at first; reiterate afterward Cohobation of the distill'd water upon the matters five or six times, the better to open the solid parts of the Crevisses, to loosen them, and make the volatile parts ascend with the water.

After distillation perfected, calcine the Mark in an open fire, and having reduc'd it to ashes, make thereof a lye, and draw forth the Salt by ordinary means. After which having mingl'd this Salt with the distill'd water, it is not only proper for the restoring of Physical persons, but to open the passages of the Urine; insomuch that some affirm it to be able to break and dissolve the stone in the Kidneys and bladder. The dose is from one spoonful to three or four, at a distance from times of meals; and the use of it may be continu'd as necessity requires.

They who only look after the Diuretick verrue of Crevisses, calcine them in the open fire, without distilling them, and having burnt them to ashes, make a lye, out of which they draw a Salt very proper for their purpose, though in no great quantity because of the dissipation of the volatile Salt by the open fire. This Salt is giv'n in a morning fasting from a scruple to half a dram in white-wine or some other diuretick liquor.

The stones improperly call'd Crabs eyes, which are found in the heads of large Crevisses, when the Sun is in Cancer, containing very much volatile Salt and some little fix'd, are not only diuretick but very proper to mortify the acids of the stomach. There is a volatile Salt and oil to be drawn from them, as from the parts of other Animals. Their tincture is also made use of drawn from them with white-wine, and giv'n with substances grounded upon Porphyrie, from a scruple to a dram, either in broth or some other liquor.

CHAP. X.

Of the Diſtillation of Storks.

THat you may ſave all that Storks have good in them; after you have pull'd off their feathers, and taken out their entrails, cut them into ſmall pieces, and put them into a glaſs Cucurbit plac'd in a Sand-bath, the Cucurbit being cover'd with a head luted with Amydon, and a ſmall Recipient luted to the beak. Then diſtill the water with a moderate fire, till the matters in the Cucurbit are almoſt dry. Having put up this water apart, put all that was in the Cucurbit into a Retort of Potters Earth or glaſs, encompaſs'd with lute, and having plac'd the Cornute in a cloſe Reverbaratory, fitted a large Recipient to the beak, and luted the jointures, make the diſtillation with a gradual fire, proceeding as in the diſtillation of other Animals, or of their parts. You ſhall have by that means a volatile Salt and Oil mix'd with the flegm, at the bottom of the Recipient, which you muſt rectifie in a Sand-bath in a Matras with a long neck, cover'd with a head carefully luted, as for the rectification of other volatile Salts and Oils.

The volatile Salt of Storks is highly applauded againſt all ſorts of poiſons and Epidemick diſtempers. It is alſo accounted a ſpecifick remedy againſt the Epilepſie. It is given faſting in its own proper water from eight or ten to twenty or thirty grains, and the uſe of it may be continu'd as occaſion requires. The diſtill'd Oil is alſo made uſe of for the ſame diſtempers, from two or three to nine or ten drops, incorporated with fine powder'd Sugar in their own water, or ſome other Cephalick liquor. At the ſame time you may alſo anoint the Noſtrils and Temples with this Oil, and apply it outwardly to anoint paralytick members, and the pained parts of the Nerves and Joints; to which purpoſe they ſometimes make uſe of the melted fat of theſe birds. The powder of the inward part of the ſtomach of the Stork, is highly extoll'd againſt all ſorts of poiſons, given in ſome Cordial liquor from one ſcruple to a dram. With the ſame ſucceſs you may take dry'd dung of theſe Birds, to which purpoſe the Salt and volatile Oil of the ſame dung is much more prevalent. But it muſt be in *Holland*, *Switzerland*, or ſome other Countries where theſe Birds build at the top of the Chimneys, where you may have enough of their dung to diſtill.

Some of the Ancients burn'd theſe Birds, as alſo Swallows for their Aſhes ſake, believing to find therein all the vertues of thoſe Creatures in a ſhort compaſs. But diſſipation of the volatile Salt and Oil muſt divert Artiſts from thoſe deſtructive ways.

CHAP. XI.

Of the Preparation of Bees *and their Honey.*

FRom Bees may be drawn through a Retort almoſt the ſame ſubſtances as from other Animals. But the little uſe of theſe ſubſtances ſeparated is the reaſon that we only burn thoſe little Animals to cinders to mix them with Pomatums, of which the fat of Leaves, and oyl of ſmall Nuts is generally the foundation: the uſe whereof, is to anoint thoſe parts where they intend the hair ſhould grow, which is almoſt the only uſe made of theſe little Animals. Though ſome there are that never burn them, but only reducing them to powder, make the ſame uſe of it, as of the Aſhes.

All the World conſents, that Honey is the choice and collection which the Bees make of the moſt pure, moſt delectable and moſt odoriferous parts of Plants; particularly, of their Flowers and Fruits: and that Wax is a Body compos'd of the more

more groſs, more ſolid, and more tenacious matter which is mix'd among the ſubſtances from whence they draw their Honey. The Honey which they gather from the ſides of Mountains in hot Countries that lye to the *Eaſt*, and there is more care to be taken of the place from whence you have it, then to trouble your ſelf to purifie it for its diſtillation; the beſt way being only to hang the Combs in a bag of tranſparent Cloath, in a place that is cloſe and naturally hot, and to let the honey drop of it ſelf, by which means you neither take away its whiteneſs nor its other good qualities either by fire or other ways.

Some, when they go about to diſtil Honey make uſe of Gravil or Flint-ſtones, or ſome ſuch Matter: But beſide that, I know by experience, that thoſe things putrifie, in ſome ſort with the Honey, and break the Cucurbit; it is much better to let it alone. For example, put two pound of Honey into a Cucurbit of Copper well tinn'd within and very high, and having plac'd it upon a little Furnace, cover'd with its head, Lute the jointures; and fit a ſmall Recipient to the Beak: Then kindle under it a Fire ſo ſmall, that may not cauſe the Honey to boyl, yet may keep it a little more then luke-warm. By that means the clear and Odoriferous water of Honey will aſcend, attended by the Spirit, which you ſhall know by its Acid taſt, and by its colour enclining to yellow, which will grow deeper and deeper, eſpecially, if you inſenſibly increaſe the Fire; whereby at length the Oylie part of the Honey will aſcend which is the laſt part you are to expect in Diſtillation. You may keep a part the clear and Odoriferous Water that aſcends firſt, ſeparate the Oyl from the Spirit, by the means of a ſheet of Cap-paper moiſtened, put into a Glaſs Funnel, and rectifie the Spirit, by conſuming the watery part which is mix'd with it, in an Evaporating Bath.

The water of Honey is opening and Diuretick, eſpecially when enliv'ned with its Spirit. The one and the other mix'd together are good to make hair grow, as alſo to heal ſeveral Diſeaſes of the Eyes, eſpecially, Suffuſions, or Pinns and Webbs. It is uſed alſo to take out ſpots from the Face; and the Spirit well rectified alone ſerves to diſſolve Iron, or Mars, Saturn or Lead, and ſome other Metals. The little Oyl that is to be drawn out of Honey, is the reaſon that we ſeldome continue the Diſtillation to the height for that purpoſe. As we as ſeldom burn the remains in the Cucurbit to draw forth the Salt, in regard it is but little and the vertues not extraordinary.

Some Writers preſcribe certain ways to draw Vinegars out of Honey; But I find no way more rational, but to let the Hydromel fermented ſowre of it ſelf, as I have ſhewed in the Galenical Preparations, which will happen in a ſmall time, provided you leave the hole of the Tunnel that contains the Hydromel open.

CHAP. XII.

Of the Diſtillation of Wax.

TAke two pound of pure yellow Wax, of a fragrant ſmell, and ſuch as was ſeparated by fire from its fæces, cut it into little pieces, and having melted it in an Iron or Copper skillet, over a very gentle fire, incorporate with them as much aſhes of good new wood as their ſubſtance will receive; then having put this mixture into a large glaſs Retort, place it in a Sand-bath in a Capſula or Kettle proportionable, ſo that the Cornute may be quite encompaſs'd and cover'd with Sand, except the neck. Then putting a ſmall covering over the Capſula or Caſe of the Retort, and fitted and exactly luted a half Baloon to the neck of the Receiver, make your diſtillation with a gradual fire, ſoft at firſt, and violent at length; letting it ſo continue till no more come forth of the Retort. Then giving the Sand time to cool and unluting the Receiver you ſhall find a thick'nd oil like Butter, the Flegm the Spirit and ſome little volatile Salt, and after you have ſtirr'd the ſubſtances in the Receiver, to diſſolve the volatile Salt in the liquors, pour them out by inclination into a Bottle, and having melted the thick oil over a very gentle fire, pour it out into

into a glaſs or gally pot to keep it for uſe; or elſe empty it into a skillet, and having melted it over a very ſoft fire, incorporate with it the pouder of Quicklime newly pouder'd of it ſelf, as much as the ſubſtance will contain; then put all this into the Retort being made clean, and ſetting in the Sand-bath and diſtilling it as before, you ſhall have an oil of Wax very clear, with ſome almoſt as white as water, mix'd with ſome little Spirit of Flegm, which you may ſeparate with a glaſs Funnel or otherwiſe.

The volatile Salt of Wax may be rectify'd in a Bolthead or Matraſs with a long neck in a Sand-bath, as well as other volatile Salts when you diſtil a conſiderable quantity of Wax. The doſe of which is from eight or ten, to fifteen or twenty grains, in white wine or ſome other liquor, as being a good Diuretick and Diaphoretick. The curdled or thick'nd oil is good to lay upon clefts and chops of the breſts, hands, feet, and fundament. It is alſo good for Childblanes, and to diſſolve hard and skirrous ſwellings. In all which caſes you may uſe the clear oil, which is beſides very Diuretick, the doſe being from three or four to nine or ten drops, incorporated with fine Sugar, and ſteep'd in white-wine, or in ſome other liquor.

The Spirit has the ſame vertues, but operates with leſs efficacy.

CHAP. XIII.

Of the Diſtillation of Cheſlops *and* Earth-worms.

I Put the diſtillation of *Cheſlops* and *Earth-worms* together, as well becauſe there is the ſame way of proceeding to be obſerv'd, as alſo for that their vertues are very near the ſame. Theſe little Animals contemptible in appearance, abound no leſs, conſidering the proportion of their bodies, in volatile Salt and Oil, then the moſt part of other Creatures, though they are very full of moiſture. You muſt put them into a Retort, and place that in a cloſe Reverberatory, with a large Receiver carefully fitted and luted to the neck, and ſo with a gradual fire draw forth the volatile Salt and Oil, mix'd with very much Flegm, of which Rectification muſt be afterwards made in a Sand-bath, with a moderate fire in a Bolthead with a long neck cover'd with its head perfectly well luted; which you have taken off, and put up the volatile Salts which will firſt aſcend; continue Rectification, and ſeparate and put up the Oil alſo, and the reſt of the volatile Salt diſſolv'd in ſome portion of the Flegm and diſtill them afterwards into a ſmall Receiver fitted and luted to the neck of the head.

Some perſevering in the miſtake of the Antients, burn to aſhes theſe worms and *Cheſlops*, as well to keep them ſo for uſe, as to extract a Salt out of the aſhes; not foreſeeing the diſſipation which the fire makes of the volatile Salt of theſe Animals, of which there remains none behind, but what the acid of the combuſtible matters has fix'd. Some there are alſo that having diſtill'd Cheſlops and Earth-worms, in a Cornute, diſſolv'd the volatile Salt in the watry part, and ſeparated that liquor from the oily with a wet ſheet of Cap-paper in a glaſs Funnel, pour drop by drop into it Spirit of Salt or Vitriol till the effervescency ceaſe; whence it comes to paſs, that not only the volatile Salt is united to the acid, but alſo their being corporifi'd and chang'd into fix'd Salt, whereby the volatile as Diaphoretick as it was, becomes only Diuretick.

This change cannot ſurprize thoſe who know the great diſpoſition which the volatile Salts have to unite to acids, and the common change of nature that will happen to them for a time by that union. Nor do they wonder more, that when you add to this Salt thus fix'd, the double of its weight of fix'd Salt drawn from Tartar well calcin'd, the acid ſhould quit the volatile to unite its ſelf to the fix'd Salt, and reſtoring the volatile to its former liberty, ſhould permit it to ſublime as it does to the top of the head, when you give it a proportionable heat.

The volatile Salts of *Cheſlops* and *Earth-worms* are equally Diaphoretick, and very proper to purify the maſs of blood, and to expell its impurities by tranſpiration. They powerfully mortify acids, and are therefore recommended for the cure of Ulcers

Ulcers, Cancers and the Scurvy: to eaſe the pains of Gouts, Rhumatiſmes, and all pains that torment the Muſcles and Nerves. The doſes and manner of taking theſe Salts, are much like thoſe of the Salts of other Animals; as alſo their oil, the vertues whereof tend very near to the ſame end.

Some there are that leaving the Earth-worms and Cheſlops for two or three days to empty themſelves between two earthen pans, waſh them with white-wine, and having dry'd them in an oven, the great heat whereof is over, pulverize them very finely, and give the powder from a ſcruple to a dram in white-wine, or in ſome other liquor, againſt ſtoppages of Urine, as alſo to cure thoſe other diſeaſes for which their volatile Salt is recommended.

The worms that breed in the ſtomachs and entrails of men may be diſtill'd in the ſame manner, and volatile Salts and Oils drawn from them, not much inferior in the ſame vertues, and which you may make uſe of inſtead of Earth-worms.

CHAP. XIV.

Of the Diſtillation of Cantharides.

NO queſtion but Cantharides are in their whole ſubſtance very ſharp and corroſive; for being bruis'd and apply'd to any part of the body, they raiſe bliſters, and ulcers too, if they lie long. And being tak'n inwardly, they make a ſtrange havock, cauſing inflammations of the inward parts, eſpecially in the Raines, Bladder, and Veſſels adjoyning to them, which ſometimes ceaſe not without piſſing of blood. Yet this malignity is no hindrance but that they are often preſcrib'd outwardly, obſerving neceſſary cautions; and but that by Diſtillation they produce volatile Salts and Oil, that produce greater effects in ſmaller quantities then any other volatiles that are prepar'd.

Take dry Cantharides without cutting off either their heads, their wings, or their feet, and fill up about three quarters of a glaſs or Earthen Retort luted round; then place it in a cloſe Reverberatory, and having exactly fitted and luted a large Recipient to the neck, make a diſtillation with a gradual fire, as for other Animals or their parts; and you ſhall find in the Receiver a volatile Salt and Oil, accompany'd with much flegm, which you muſt empty into a Matraſs, with a long neck, and having plac'd it in a Sand-bath cover'd with its own head carefully luted, with a ſmall Recipient fitted and luted in the ſame manner to the neck, make a Rectification of the ſubſtances with a moderate fire, which will preſently cauſe the volatile white and Cryſtalline Salt aſcend, which you muſt ſtop up with as much ſpeed as care, in a bottle of glaſs perfectly well ſtopp'd, putting on another head in the place of that tak'n off; the Commiſſures of which having carefully luted, continue the fire and draw forth into a ſmall Recipient, the Oil and the reſt of the volatile Salt diſſolv'd in ſome little Flegm, which it has carry'd away with it. Which done, ſeparate the Oil from the Liquor, and keep each apart in double glaſs bottles well ſtopp'd.

The volatile Salt of Cantharides is one of the moſt powerful Diuretics that are to be met with, ſo that it is affirm'd to be able to break, and diſſolve the ſtone in the Kidneys and Bladder. It is ſo penetrating and ſo ſharp, that it raiſes little bliſters upon the tongues of thoſe that taſte it. So that it is not to be tak'n but temper'd in Liquors, or perfectly well mix'd in Opiates, or other ſoft medicines from one or two grains, to five or ſix at moſt. The effects are much more advantageous and with much leſs hazard, then thoſe of Cantharides giv'n in the ſimple ſubſtance, to raiſe the vigour of either ſex to amorous performance. For which purpoſe the Oil is very proper, mingl'd with equal parts of diſtill'd oil of Cloves, and twelve times as much preſs'd oil of Nutmegs, to anoint the ſoles of the feet, the Teſticles, and the Perineum, provided their ſtrong ſmell can be endur'd. The liquor containing the reſt of the volatile Salt may be made uſe of for the ſame uſes as the Salt it ſelf, proportioning the doſe, according to the greater or leſs quantity of Flegm that it contains.

CHAP.

CHAP. XV.

Of the Diſtillation of Emmets.

PUt into a Matraſs proportionable as many Emmets as you can catch in Harveſt time, and pouring upon them Spirit of Wine well rectifi'd three fingers above the Emmets, ſtop the Matraſs exactly well, and ſet it over a Bakers Oven till the Emmets be quite chang'd into liquor. At which time having unſtopp'd the Matraſs, and pour'd out the liquor into a glaſs Cucurbit, cover it with its head, and lute the Commiſſures exactly; and having plac'd it in a Sand-bath, and fitted and luted a ſmall Recipient to the neck, make diſtillation with a very moderate fire, till there remain behind but very little liquor in the Cucurbit. Then having cool'd and unluted the Veſſels, pour out and keep the ſpiritous water diſtill'd, and full of the volatile Salt of Emmets into a double Viol well ſtopp'd to keep for uſe.

This ſpiritous water is very much recommended to revive and ſtrengthen the natural heat, to provoke luſt; for which purpoſe they add to it certain Aromaticks, as Cinnamon, Cloves, Mace, *&c.* It is alſo very good to reſtore perſons that are waſted with Atrophies. It is given from half a ſpoonful to a whole ſpoonful, alone or mix'd with a little Wine, or with a third or fourth part of Cinnamon-water.

Emmets may be alſo put into a Matraſs, which being well ſtopp'd, and lapp'd about with dough about a fingers breadth, is to be put and kept in a Bakers Oven all the while the great Loaves are baking; after that the liquor is to be ſtrain'd out and kept in a double Viol well ſtopp'd, as a moſt ſpecial remedy againſt deafneſs.

They are alſo to be infus'd and boil'd afterwards over a gentle fire in Sallet-Oil, then ſtrain'd and kept to anoint the parts of nature, to advance Giture. There may alſo a volatile Salt and Oil of Emmets be drawn, by diſtilling them in a Retort, like the Cantharides, which are almoſt for the ſame purpoſes.

CHAP. XVI.

Of the Preparation of the Peacock.

THE Peacock which is accompted one of the moſt beautiful birds, and one of thoſe that live longeſt, has not for nothing gain'd the Title of a Medicinal Bird, in regard that not only his body contains ſeveral remedies proper for Phyſick; but becauſe his fleſh will keep longer then that of any other Animal. Peacocks broth is accompted a particular Remedy for the Pluriſy. However this is certain, that from the whole body of the Peacock, from his Excrements, and eſpecially his dung, many ſpecifick Remedies againſt the Epilepſy are to be drawn, not to ſpeak of thoſe other vertues attributed to other parts of the body.

Pick the Peacock well, and draw him, then cut him to pieces, and put him into a Cucurbit of Glaſs plac'd in a Sand-bath; cover the Cucurbit with its head, and having luted the cloſures with Amydon, and fitted a ſmall Recipient to the neck, you ſhall draw forth a water, very fit to fortify the brain, and preſerve it againſt ſuch diſeaſes as it is ſubject to. This Diſtillation being at an end, take that which remains out of the Cucurbit, and put it into an earthen Retort luted all over; ſet the Retort in a Reverberatory, and having exactly fitted and luted to the beak a large Receiver, you ſhall with a graduated fire, draw forth a volatile Salt and an Oil together with much Flegm, which muſt be rectify'd in a Matraſs like the former. The Rectification will yeild a white Cryſtalline volatile Salt, and a clear oil of great vertue, eſpecially againſt the Epilepſy, in the ſame doſe and after the ſame manner as other volatile Salts of the ſame nature; and making uſe of the Oil to anoint the Temples, ſutures of the ſcull, and to put up into the Noſtrills.

As

As for Peacoks dung, after you have well dry'd and bruis'd it, put it into an Earthen Retort, luted all over, and place it in a close Reverberatory; then having fitted and luted a large Recipient to the neck, you shall draw forth substances very like to those which the Peacock it self yeilds in Distillation, which must be also rectify'd in a long Matrass, to be us'd for the cure of the Epilepsy. The volatile Salt and oil of Peacock and his dung is also very proper to cure vertigoes, and to suppress the vapours which cause it.

It is believ'd that the dry dung of the Peacock, to the weight of a dram being infus'd in white-wine, then strain'd and giv'n to drink every morning fasting from the new to the full of the Moon, is a specifick remedy against the Epilepsy and Verticles. The fat of this foul is also recommended against Colicks, and the feathers burnt, suppress the vapours that rise in the Matrix.

CHAP. XVII.

Of the Preparation of Castor.

YOU may through a Cornute distill all the parts of the Castor, as we do those of other Animals, and rectify all the substances drawn from them in a Matrass with a long neck. But the conveniency of Salts drawn from other Animals and there nearness in vertue to those which might be drawn from this Animal, make us forbear any such preparation. So much the more because the transcending qualities which are known on all hands attributed to the substances contain'd in the vesicles of that Creature, which for their excellency are call'd particularly *Castoreum*, cause us to neglect the other parts. These qualities, together with the dearness of the cods or pouches, together with the nature of the substances enclos'd therein, is the reason that we never expose them to a fire of Reverberation, to separate the volatile Salt and Oil which might be drawn forth by a Retort. And therefore having taken off the unctuous part that lies in the bladder by it self at the top of the bags, and set it by, we bruise or cut very small the fleshy substance, and putting it into a Matrass proportionable, pour upon it Spirit of wine well rectify'd, till it swim four fingers above the substances; the having perfectly stopp'd the Matrass, we place it up on a Bakers oven, leaving it there to digest for fifteen days or three weeks, or longer if you please, stirring the Ingredient from time to time, the more effectually to impregnate the Spirit of Wine with their most Essential parts, which will be at length something of a high colour. Then having strain'd and squeez'd the substances, we keep this Liquor in a double glass bottle, under the name of *Tincture of Castor*: but if you desire a Distillation, pour out all the matters contain'd in the Matrass into a glass Cucurbit, and having plac'd it in a Sand-bath, and cover'd it with its head carefully luted, and also fitted a small Recipient luted as exactly, draw forth the Spirit with a moderate fire, till you have driv'n all the Spiritous part to ascend. By which means you shall have that which they call the Spirit of Castor, which you will find to have rais'd along with it in its Distillation, the most pure and most volatile substance of that part of the Animal, which else had remain'd in the Tincture. The vertues Doses and manner of taking are much alike, in regard they are of greater prevalency in all cold diseases of the brain and stomack, but particularly against those of the Matrix. The dose is from half a dram to two, and sometimes and upon certain occasions to half an ounce mixing them in Cephalick, Hysterick or Stomack waters. Sometimes they are put up the Nostrils, or us'd to anoint the Temples and Wrists.

As to what remains in the Cucurbit, having filter'd it, and put it into an Earthen Pipkin well glaz'd within, and the Pipkin upon a very soft fire, evaporate by degrees the superfluous moisture to the ordinary consistence of Extracts, then letting it cool, put it up in a Gally-pot close stopp'd, and keep it for your use. This Extract containing in it all the pureless volatile parts of the Castor, deserves to be sav'd, to be dissolv'd in Spirit of Castor, or in Cephalick or Historick Liquors, or to be tak'n in Bolus, from half a scruple to half a dram, for the same diseases for which the Tincture and Spirit are prescrib'd.

As for the Unctuous part which is found in a Bladder by it self, at the upper end of the Bags or Cods, Chymistry takes no notice of it in preparation. But it may be by the Galenick Pharmacy properly used to make oil of Castor, as I have said in its due place.

I could have fill'd this Book with several other Chymical preparations of Animals, or their parts, but I believe I have produced enough to satisfy those who apply themselves to Chymistry, and to enable them to undertake and to accomplish with success all those preparations of Animals. And therefore I proceed to Minerals.

The

The Third Book:

Containing the

CHYMICAL PREPARATIONS OF

MINERALS.

CHAP. I.

Of the Preparation of Earths *and* Bolus's.

I Began the first Book of this Third Part with the Chymical Preparation of Plants. For finding them upon the surface of the Earth which produces them, they present themselves first to my Eyes. Immediately after I treated of the Preparation of Animals, for whose sake the Earth produces those Plants. It behooves me now to shew you the way how to prepare the Earth it self: that it may afterwards proceed to the preparation of those mixt Bodies which it encloses within its Bowels, and of those other Substances that depend upon them; and which may be plac'd in the Number of Minerals. I do not here undertake to speak of that Natural Chymistry which is continually practis'd in the Earth, to bring forth those Productions which we see, and which lye concealed from us; but only of such Chymical Operations as may with advantage be made upon the Substance it self, and the mixt Bodies that belong to it, of the most part whereof the Earth is esteemed to be the Mother and the Nurse.

There is a fix'd Salt to be drawn from an untill'd Earth, naturally barren, observing this Method; Having digg'd a hole about two foot deep, and taken out some bushels of the bottom Earth, put the Earth into a convenient tub, and having soak'd and stir'd it in three times as much Rain-water as there are measures of Earth, leave the Earth to settle for two or three days; then having pour'd out the water by inclination, and strain'd it through course Paper, evaporate the superfluous moisture in a Caldron, or an iron kettle over a moderate fire, and you will find the Salt of Earth at the bottom of the Vessel. You may make this Salt white and crystalline, by putting it into a Crucible, and exposing it to a violent fire for a good hour, stirring it from time to time with an iron Spatula; then having dissolv'd it in Rain-water, and filter'd that water, you may coagulate it again.

The qualities of this Salt are very like to those of Sea-Salt, so that you may also draw from it a Spirit almost of the same nature.

In regard the Lotions of Earth, and their preparation upon Porphiry, are the ſame with thoſe of Galerice Pharmacy, I will only ſay by the by, that over much Lotion carries away what the Earths have of Salt and Spiritous; and that Lotions not being made uſe of but to ſeparate their Sandy parts, or their other impurities, you may without altering the vertues of thoſe Earths, do as well by beating them in a Mortar, and ſifting them thorough a ſilk Seirce, which the Sand nor other impurities cannot paſs thorough; you may moiſt'n clay Moulds with Cordial waters or decoctions; or the Boles that you grind upon Porphyry, or knead them into little Loaves, provided you do not wet them too much.

From Clay Earths dry'd, eſpecially thoſe of Lemnos, you may extract a Flegm and Spirit, ſomewhat tartiſh, commended to provoke ſweat, diſtilling it thorough a Retort in a cloſe Reverberatory. You may alſo prepare Magiſteries of this Earth, diſſolving them in Spirit of Salt, or Niter, and precipitating them with Salt of Tartar diſſolv'd into Liquor, which uniting it ſelf to thoſe acid Spirits, cauſes them to abandon the body which they had diſſolv'd; or elſe by pouring fair water upon them, which weakning thoſe Spirits, produces the ſame effect. But the violent operation of thoſe Spirits upon the Earth, being as little advantageous, as the diſſipation of its Salt and Spiritous parts, which happens by the conjunction of the ſame Spirits, and by the Lotions which muſt be us'd to carry off their Acrimony, I am certain that theſe Clay Earths being taken out of their own place, and ſifted thorough a ſilk ſive, are incomparably much better. For they retain their particular quality to dry up and cloſe, to reſiſt the putrefaction of humours, poiſon, and the malignity of Feavers, to diſſolve curdl'd blood and provoke ſweat. They are alſo of great force againſt Dyſenteries and Diarrhea's.

CHAP. II.

Of the Preparation of Waters.

I do not undertake here to ſpeak of the uſe of water, no more then of the neceſſity of its union with the Earth, for the generation and production of mixt bodies. But becauſe it is uſually plac'd among the number of Minerals, it behoves me to ſpeak of its principal preparations. Both the one and the other Pharmacy make uſe of Fountain and River water for ſeveral uſes, with any preparation of them at all; in ſome places they are forc'd to make uſe of well and ſtanding water inſtead of others. But Chymiſtry obſerves ſomething more excellent in Rain water, more eſpecially at the time of the Equinoxes and chiefly the vernal. All Rain water is generally more ſweet, more thin, more light then any other water, becauſe the Sun has rais'd it, and compos'd it of the moſt ſubtle vapours of the water, and that it has had time to purify it ſelf, and to ſubtilize it ſelf by paſſing thorough the air before it fall upon the ground. The Spring is alſo the time wherein the air moſt fill'd with univerſal Spirit, the effects whereof are ſo potent for the production of all things, and that it abounds moſt in inviſible volatile Salt, which animates all ſublunary ſubſtances.

Yet the purity of Rain water is not ſuch neither, but that you may let it ſettle for two or three days, and that you muſt filter it, before you make uſe of it, and diſtill it in *Balneo Mariæ*, or evaporating Baths, when you intend to augment its ſubtility and penetration. To which purpoſe it is enough with a moderate fire, to draw off but half of the moiſture; then having emptied and kept apart the reſidence, and pour'd in more Rain water, continue this Diſtillation till you have enough water ſubtiliz'd and charg'd with the moſt volatile Salt of Rain water; after which having put all the Reſidencies together, or in ſeveral glaſs Cucurbits, in the ſame Bath, evaporate the moiſture, till only the fix'd Salt of the Rain water remain at the bottom dry'd and mix'd with ſome Terreſtreity.

Some to have a more Spiritous water, ſhut up the rain water in a Matraſs, and having ſeal'd it Hermetically, ſet it to digeſt or putrify for thirty or forty days, the better to precipitate the feces, and to make the Spiritous part more fit to forſake the watry, and to aſcend firſt in Diſtillation.

Snow

Snow being only rain congeal'd in the Air by the cold, and the volatile Salt part being by that means ſtopp'd, you may after the ſame manner draw forth a water, not only like in colour, ſavour, and vertues, like that of Rain water, but alſo more penetrating, becauſe that Snow abounds more in Salt. And that's the reaſon there is more Salt found after the Evaporation of Snow then Rain water.

The diſtill'd waters of Rain or Snow, are very proper to penetrate the ſubſtances of ſeveral mix'd bodies, eſpecially thoſe of Vegetalls, and to draw forth their Tincture; which they will do more effectually if you add to them their fix'd Salt. It is ſaid alſo that the Spirit which may be drawn from this fix'd Salt, is good to diſſolve Metalls, eſpecially Gold.

The nature of dew very much reſembles that of Rain water, or Snow, but it is more ſubject to diſſipation. For proceeding only from the Exhalations of the earth, and not aſcending ſo high as the vapours that cauſe Rain, it is in leſs quantity, and remains not long. For being only in the middle of the Spring, when the Sun approaching toward the Solſtice, the air is clear and ſerene, and not at other ſeaſons, or when the air is cover'd with Clouds, which hinder the Rayes of the Sun from drawing up the Exhalations of the Earth, or turn to Rain; and not falling neither in windy weather; you muſt be very diligent to gather it when it falls, or which is better, to receive it into Baſons and other Veſſels as faſt as it falls, and put it up at the ſame time into bottles well ſtopp'd, to make uſe of it in that condition, or to draw from it a Spirit, having digeſted it for forty days in a Matraſs with a long neck hermetically ſeal'd, and obſerving the ſame method as for Rain water, though you muſt not think to find the ſame fix'd Salt at the bottom of the veſſel as Rain water would have yeilded, the extream volatile of the Spirit of dew, cauſing it to aſcend in Diſtillation.

It is a cuſtom with ſome to evaporate over the fire the Sea water, and the water of the brackiſh fountains in the French Country, and in other places that they may get the Salt, which remains after Evaporation; but they never uſe to diſtill it for the waters ſake, but only upon the Sea, when they want freſh water: though that which they do draw from thence be accompany'd with a kind of Acrimony, becauſe of the volatile particles of the ſame Salt which riſe in Diſtillation.

I ſhall not ſpeak here of the Diſtillation of Mineral waters, becauſe it is not neceſſary for their uſe, and for that we never ſpend them but in their natural condition. Nor ſhall I ſpeak of the method to be obſerv'd for the diſcovery of the ſeveral ſubſtances which impart their principal vertues to Mineral waters, for which the curious may find all neceſſary inſtruction, in a book of *Obſervations upon the Mineral Waters of* France, written by *Monſieur Du Clos*, Phyſitian in ordinary to the King, publiſh'd in the year 1675. after a great number of experiences by him made upon that ſubject. Nor is it neceſſary to ſpeak of the artificial waters that may be made by diſſolving in Rain, River, or Fountain water diverſe Salts and other Spirits, accomodating them to the malidies and temmperature of the Patients, the juſt and certain Compoſition whereof renders the uſe of them much more advantageous, then that of Mineral waters, which are made uſe of like one Saddle for all Horſes. It being impoſſible to know the preciſe quantity of particles which they have taken along with them of the ſeveral Mineralls which they have met with in the Entrails of the earth: though by their ſmell, colour, and other diſtinctions which may be made, ſome conſiderable knowledg may be had of Mineralls which communicated their principal qualities to them, and that ſome judgment may be given from the advantages, which a good number of perſons have found by them in diſeaſes of the ſame nature which you deſire to cure.

CHAP. III.

Of the Preparation of Stones, and pretious Stones in general.

I Will not examine the reaſons upon which ſome men have grounded the ſolidneſs and hardneſs of ſtones, or precious ſtones, or the cauſe of their lapidification. For their attributing the cauſe thereof to the proportionate union of the Alkali's with the Earth, or of both of them with Acids, or with water or juices that have a ferment in them, or a petrifying ſeed, is of little moment. Though we find wood, bones, and other ſubſtances to petrifie in ſome waters, and ſtones that are hid in the bodies of certain Animals, as alſo of men, beſides that the Birth has been petrified in the wombs of ſome women. Nor does it ſignifie much that they have attributed another cauſe to the Acid of the air, of which we ſee apparent effects in Earths, which lying upon the ſuperficies of Plains and Mountains, petrifie in ſucceſſion of time. Or that they would add thereto the natural diſpoſition which ſome ſtones have to reſume their ſhape of ſtone, after they have loſt it, like Plaiſter; or to communicate that inclination to ſubſtances mix'd with them, as Lime does. My chief intention is here to treat of the principal intentions that Chymiſtry practiſes upon ſtones, and precious ſtones.

The Mechanick imitating Chymiſtry, calcines in proper Furnaces, with a violent and long continu'd fire, ſeveral common ſtones, as certain River Flints, and certain ſtones whereof they make Lime for building, and thoſe whereof they make Plaiſter. Chymiſtry ſometimes calcines certain precious ſtones, keeping them ſome hours in fuſion over a violent fire, as is often practis'd upon cryſtal; ſometimes ſhe mixes with them Niter, Salt of Tartar, or ſome other Salt, when ſhe would calcine them to draw the liquor from them, as to have the liquor of Cryſtal. Sometimes ſhe only heats them two or three times red hot in the fire, and quench them as often in Water, as is practis'd upon *Lapis Lazuli*; ſometimes ſhe diſſolves them in corroſive liquors, as the Saphir in that of Vitriol, and ſome other precious ſtones in diſtill'd Vinegar, and which is that which they call *Solution*, or *potential Calcination*, which is attended by other operations, of which in due place. She alſo makes Magiſteries of theſe Stones, though to little purpoſe, in regard their vertue is much inferior to the ſtones from whence they are extracted.

CHAP. IV.

Of the Preparation of Lime.

ALL the world knows, that the Stones whereof Lime is made, cannot produce thoſe effects which are remarkable in them; without having paſs'd the fire, and being reduc'd into that condition by calcination. 'Tis known alſo, that the violent operation of the fire conſumes all their moiſture, and that they have not acquir'd the vertue of binding in one maſs, and petrifying together Sand and other ſubſtances, till after they have been calcin'd and ſoak'd in water. We muſt alſo confeſs, that the Lime is not free from the impreſſions of the fire which it has undergone. Yet we have no reaſon to conclude from thence, that its cauſtick quality proceeds from little fiery bodies, which they would have to be encloſed within it. For if that were true, Tyles and Bricks, which ſuffer as much violence of fire, would not be without thoſe little igneous or fiery bodies. Thoſe ſtones which are not of the ſame nature as thoſe of which they make Lime, would have the ſame cauſtick quality, have endur'd the ſame fire as the Lime-ſtones, and ſometimes a much

much longer time, Iron, Copper, ſilver, Gold, and ſeveral other ſubſtances would be alſo Cauſtick, after they have endur'd the fire as long, and renew'd it as often. But ſince there is no ſuch thing, and that they are not able to burn, but when they come juſt out of the fire, we muſt ſearch in the proper ſubſtance of the Lime, and no where elſe for its Cauſtick quality, and particularly its half Spiritous Salt, the ſubtility and penetration whereof manifeſts it ſelf very apparently, though it cannot be ſeparated from its Terreſtrial part to reduce it into a Maſs, like other Salts.

'Tis then the dryneſs of this Salt, and the Terreſtrial part, and their great inclination to join with the water which has its natural acid with it, which is the ſole cauſe of their heat and effervescency when they join together, which makes them act reciprocally one upon another. Whence proceeds the particular quality which the Lime has, to bind and petrify all bodies that are mix'd with it, ſo that we are not to impute that action, no more then the Cauſtick quality to the little bodies of fire, the neceſſity whereof is ſo much the leſs maintainable, becauſe we ſee by experience that Quicklime is not heated at all, by pouring upon it the Spirit of wine, or oil, though both the one and the other are very combuſtible, but that on the contrary they put out the heat which happens to Lime by its conjunction with the water. As to the Cauſtick effects of Lime, they are to be attributed to the Solidity, and incroaching reſemblance of the parts of its own proper Salt, which are little different from thoſe of the fire, to which they pretend to attribute thoſe effects.

The moſt ſimple preparation of Quicklime is that of its Elixiviation, not that we can ſeparate the Salt from it, as from other Lyes. But we diſſolve in water the Spiritous deſiccative Salt, which it is alſo burning when is concenter'd with any Analogous ſubſtance. To which purpoſe having put two or three pound of good Quicklime into a grat Peuter Baſon, pour upon it by little and little, Rain or River-water, as much as ſuffices to open the Lime, and diſpoſe it to diſſolution. Then pour on more at ſeveral times, till the water be about five or ſix fingers above the Lime, ſtirring the ſubſtances often with a woodden Spatula, to the end the Spiritous Salt part of the Chalk may be well diſſolv'd in the water. After this letting the whole ſettle for ſome hours, pour out by Inclination and filter the clear water; which muſt be kept in double bottles well ſtopp'd for uſe. For this is call'd Lime-water. Then you may pour upon the ſame Lime as much more freſh water, as at the firſt time, and ſtir it, after that giving it leave to ſettle, filter it alſo and keep it apart. Repeat the ſame operation the third time, to take away utterly from the Lime all its Salt part. Having ſo done, you may if you pleaſe dry the ſettlement of the Lime, and keep it as an extraordinary good and gentle Dryer. It is eaſy to judg which of theſe waters is moſt effectual; and therefore they are to be kept both apart, the one for leſſer, the other for greater cauſes, as well againſt Gangrenes, as maladies of the Eyes, and the moſt part of Ulcers.

There is alſo another water made of Lime which the Moderns *Phagedenick*, or the Canker-water, which is nothing but a mixture of three pints of the firſt water with three pints of good Spirit of wine, and half an ounce of good ſublimate corroſive. But this proportion is not ſo regular but that you may augment or abate of the doſe of either, eſpecially of the ſublimate. Some alſo add as much Arſenick in Powder as ſublimate, as alſo ſome drops of Spirit of Vitriol. This water is highly eſteem'd for ſtopping that Gangrene and its accidents, and for the cure of malignant and corroding Ulcers: to which purpoſe the bottle muſt be always well ſhak'd to thick'n the water: though it muſt not be done when apply'd to the eyes: for then the water muſt be clear and temper'd with Ophthalmick Waters. It is alſo made uſe of for the cure of Eryſipela's, red ſwellings call'd *Flegmons*, burns, and all ſorts of inflammations, tempring it with convenient waters.

You may make an Ophthalmy water with half a pint of the firſt water, one pint of the ſecond, and a pint and a half the third, and three drams of Salt Ammoniack, putting all together into a Copper veſſel, and there leaving it, till the liquor have acquir'd a blew colour; then having filter'd this water thorough a ſheet of paper, keep it in a bottle well ſtopp'd for your occaſions. The particles of Copper diſſolved in this water, and mix'd with the Sal Ammoniack produce a good effect, and make an excellent water for diſeaſes of the eyes.

Schroder highly extolls the Spirit of Quicklime, to break and diſſolve the ſtone in the kidneys and bladder, giving it in whitewine, or broth, from two drops to five or

ſix. And for its preparation he preſcribes, that having ground the Quicklime upon a Porphyry, you ſhould imbibe it with the Spirit of good wine, diſtilling it, and cohobating or ſprinkling eight or ten times in an Alembick of Glaſs exactly luted, and ſet it in a *Balneum Mariæ*, or an evaporating Bath; and that having mix'd ten ounces of this Lime dry'd with an ounce of Salt of Tartar, and eleven ounces of the *Caput Mortuum* of the ſame Salt well dry'd, you ſhould put this mixture into a large Retort luted all over, and diſtill it with a gradual fire in a cloſe Reverberatory, having fitted to the neck of the Retort a large Receiver, having a little Spirit of wine in the bottom, and a little Pipe underneath the part where the neck of the Retort ends, with a little Recipient to it. So that the Flegm being diſtill'd into the ſmall one, by encreaſing by degrees the heat of the fire, the Spirit may follow, and entring in vapours into the great Recipient, may there diſſolve and mix it ſelf with the Spirit of Wine. And then having at length lighted and burnt the latter, you may find at the bottom the Spirit of Lime, proper for the uſes above mention'd.

Others, to put themſelves to leſs trouble and care, having finely ground the Quicklime, and ſprinkl'd it with as much good Spirit of Wine well rectify'd, as it can well ſuck up, fill therewith about the third part of a large Retort well luted about, and having ſet it in a cloſe Reverberatory, and fitted and carefully luted a large Recipient to the neck of it, make the diſtillation with a gradual fire, and after they have drawn forth the Spirit of Lime with the Spirit of Wine, and fir'd and conſum'd the latter in ſome Veſſel, find at the bottom that of the Lime, which they keep in a double glaſs Bottle cloſe ſtopp'd.

The Cauſtick quality of the Lime agrees very well with that of the corroſive Salts, when you intend to make Cauſtick ſtones. For the preparation of which, having finely powder'd a pound of Quicklime, and having mix'd it with two pound of Salt of Tartar newly prepar'd and powder'd, calcine them together for two or three hours, in a large Crucible over an open fire; afterwards make a Lye thereof, which having filter'd and evaporated, till the Salt remain dry at the bottom of the Veſſel, put the ſame Salt in a *German* Crucible over a violent fire, till it come to run, at which time pour it into a Skillet of ſmooth Copper, heated before, where you may cut it while it is hot, into little pieces, fit for Cauteries, putting them up as ſpeedily as you can into double glaſs Bottles, exactly well ſtopp'd.

You may alſo prepare ſtones for Cauteries, with the ſtrong Lye whereof black Soap is made, which is compos'd of Quicklime and corroſive Salts. You may alſo prepare them with equal parts of Quicklime and Aſhes made of Wine-Lees burnt, macerated together in water for ſome days, then filter'd and boil'd into Cauterizing ſtones. You may alſo prepare them by making Lyes of the Aſhes of Aſh, Oak, Vine-twigs, or Bean-ſhells, mix'd with Quicklime, filtring them, and coagulating them into ſtones, as I have already ſaid.

CHAP. V.

Of the Preparation of the Stone of Judea, *and that of* Linx.

THE great number of Remedies every day prepar'd to open the paſſages of the Reins and Ureters, and other conveyances for the Urine, is the reaſon that the ſtone of *Judea* nor that of *Linx* are ſo frequently prepar'd. Of which the former call'd alſo the Stone of Phænicia, and Syria is of a white Aſhy colour, of a tender and crumbling ſubſtance, of the bigneſs and ſhape of an Olive, but ſometimes a little longer, and upon the outſide equal and proportionable ſtreaks quite through the length. The latter call'd alſo Belemnites, becauſe its Pyramidical figure in ſome ſort reſembles an Arrow, is equally as brittle, but not of the ſame colour, and without ſtreaks. However I thought good to ſhew you their preparation

tion, which may ſerve as an example for other ſtones that are not unlike them in ſubſtance.

Having finely pouder'd both the one and the other of theſe ſtones, and mix'd them with their weight of Sulphur beaten in a Mortar, make them red-hot in a Crucible over a good Charcoal-Fire, and ſo by degrees at ſeveral times make projection of this mixture, before you put in any more, continuing your fire till all be projected, and that the Sulphur be all conſum'd; then having beaten the Reſidence over again in a Mortar, and put it into a glaſs-Cucurbit, make a mixture of two parts of Vinegar diſtill'd, one part of good Spirit of Salt, and one other part of good Spirit of Honey well-rectify'd, and pour it upon the reſidence ſwimming above it about four fingers. Then having plac'd the Cucurbit in a Sand-bath, and cover'd it with a Paper, kindle underneath a good ſoft fire, only enough to give the ſubſtances a lukewarm heat, ſtirring them from time to time with a wooden Spatula, till you find that the Menſtruum be ſufficiently impregnated with the ſubſtance of the ſtone which it has diſſolv'd. After which having pour'd out by inclination, and ſet apart the liquor that ſwims at the top; pour upon the reſidence, the like quantity of the ſame freſh Menſtruum, placing the Cucurbit again in the ſame bath, keeping it there as long as at the firſt time. Then mixing this liquor with the former, and having filter'd them, evaporate the ſuperfluous moiſture to the thin filme, if you deſire a Cryſtalline Salt; or to the drineſs of the reſidence, if you only deſire a Coagulated Salt at the bottom of the Cucurbit.

This Salt is highly eſteem'd for breaking the ſtone in the Reins and Bladder, and to give great releif in all ſtoppages of Urine. You may give it from ſix to twelve or fifteen grains in Diuretick liquors. It may be alſo turn'd into liquor, by expoſing it to the air; and make uſe of it, augmenting or abating the doſe according to the proportion of liquors mix'd with it.

Men would go upon wrong grounds, did they beleive that theſe Stones afford all that quanty of Salt which is found at the bottom of the veſſel, after theſe Menſtruums made uſe of; for the Salt which they contain is very little: nor can we reaſonably aſcribe that which we draw from them but to the Salt part of Menſtruums incorporated with the proper ſubſtance of theſe ſtones which they diſſolv'd; the ſame thing befalling them, which may be obſerv'd in Quicklime, and Pearles, when they are diſſolv'd in Vinegar diſtill'd, or in ſome other corroding Spirit; of which you more certainly prove the truth, by pouring upon theſe diſſolutions, the liquor of Salt of Tartar, or any other Alkali; for you ſhall find by the conjunction of theſe Salts with the acids, the latter having abandon'd the proper ſubſtance of the Stones which they had diſſolv'd, will ſhew it ſelf by precipitating in pouder to the bottom of the veſſel like a Magiſtery. And if any be ſo curious as to dry and weigh it afterwards, they ſhall find that it weighs within very little as much as the ſtone weighed before it was diſſolv'd in the menſtruum.

CHAP. VI.

Of the Preparation of the Bloodſtone.

THE Blood-ſtone may paſs for the ſubſtance of Iron, not only becauſe it has its properties, but alſo becauſe you may extract that mettal out of it. It had this name giv'n it, either becauſe of its vertue to ſtop bleeding, or becauſe the colour of it reſembles blood, though it be mix'd with brown ſtreaks ſomewhat larger then thoſe of Cinnabar.

Galenick Pharmacy only moiſtens the blood-ſtone with ſome Aſtringent water, and grinds it into powder upon Porphyry, to make and dry it into Trochiſhes. But Chymiſtry goes farther, making thereof conſiderable preparations, among the reſt Diſtillations, Sublimations, Tinctures, and Extracts.

This Stone may be diſtill'd alone through a Retort, after the ordinary manner, and an acid martial Spirit drawn out of it with a gradual fire, like to that of Vitriol. But you may expect other advantages, obſerving the following method:

Having finely powder'd two pound of Blood-ſtone, and two pound of Sal-Armoniack, mingle them together, and put them into a large Cucurbit of Potters-Earth well luted about, and having cover'd it with its head, and exactly luted the Commiſſures, place it upon a proportionable Furnace; then having fitted and exactly luted a Receiver to the neck of the head, make your diſtillation with a naked fire, very ſoft at firſt, but increaſing the heat by degrees, to the utmoſt violence at laſt; and by this means you ſhall find in the Recipient a nurinous Spirit, very penetrating, and of a yellow colour, and upon the ſides of the Cucurbit above the ſubſtances, the Flowers, having the colour and ſmell of Saffron; for which reaſon it is call'd the Philoſophers Aromatick.

Advantage may be afterwards made of that which remains in the Cucurbit; for having put it into a Retort daub'd over with lute, and having plac'd it in a Furnace of cloſe Reverberation, you ſhall extract by the ordinary ways a martial Acid Spirit, containing in it alſo ſome ſmall quantity of that of Bay-Salt, which made one part of the compoſition of Sal-Ammoniack. You may alſo extract a tincture of the Flowers; to which purpoſe having put them into a Matras, pour upon them Spirit of Wine well-rectify'd, about four fingers above the ſubſtances. Then having exactly luted the Matras, ſet it ſeven or eight hours in digeſtion upon a Bakers Oven; then filter and put up the tincture; which you may after that reduce into an Extract, by drawing off the greateſt part of the Spirit of Wine through a glaſs-Alembick in a Cinder or Sand-bath, over a moderate fire.

The Acid Spirit of the Blood-ſtone participating very much of Mars or Iron is very opening, and of great vertue to unſtop the obſtructions of the Liver, the Spleen, and all the Bowels: it is alſo very diuretick. The urinous volatile Spirit proceeding chiefly from the Sal-Armoniack is diaphoretick, and very proper to purifie the whole maſs of the blood. For which reaſon it may with great advantage be made uſe of in malignant Fevers, the Scurvy, and in diſeaſes of the Head. The doſe both of the one and the other is from five or ſix to twelve or fifteen grains in proper liquors. The volatile Salt, the Tincture, and Extract are highly eſteem'd to mortifie Acids, and cure diſeaſes of which they are the cauſes. The doſe of the Tincture is from eight or ten to twenty or thirty drops: of the Salt and Extract from half a ſcruple to half a dram, mixing them in proper liquors, or elſe in Bolus.

CHAP. VII.

Of the Preparation of Cryſtal.

IT may be ſaid of the moſt part of Preparation which writers would have practiſed upon Cryſtal, that they are only impertinent occaſions to give men trouble, and to waſte Coles, and to make us of other Materials and veſſels without any hopes of profit or advantage. As we may obſerve by the Salt, Magiſtery, Liquor, Elixir, Eſſence, and ſome other preparations of this nature which they have labour'd to make of Cryſtal. For which they have made uſe of the utmoſt violence of fire, to which they would have the Cryſtal expos'd for a long time, and for ſeveral times, for the actual calcination of it in an open fire; and then they have made uſe of Salts and corroding Spirits to diſſolve it. But we muſt be aſſur'd that the Salts and the liquor which we draw from thence, are nothing elſe but the Salts or corroding Spirits embody'd, which have corroded and diſſolv'd the proper ſubſtance of the Cryſtal. For the aſhes of the burnt-Lees of wine, the Salt of Tartar, the Niter, the Bay-ſalt, or Sal-Ammoniack, mix'd with the Cryſtal when it is calcin'd in the Crucible in an open fire, and the Vinegar diſtill'd, or the Spirit of Niter, which ſome make uſe of for the potential Calcination of Cryſtal, after it is actually calcin'd, doing an extream violence to the whole ſubſtance, cannot but change the qualities of it in an extraordinary manner, while they are really the thing which is called Salt of Cryſtal, and the principal ſubſtance of the liquor that bears that name; and for that the ſubſtance of the Cryſtal is totally diſſolv'd therein, and in a condi-

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tion to be separated when you would make a Magistery thereof, or satisfy curiosity.

Whence it is easy to judg that the best preparation of Crystal is that which does least violence to nature, and changes least the properties of it. For this reason it may be very fitly made use of, after you have ground it upon Porphyry, and reduc'd it to a pouder almost impalpable, or after you have several times made it red hot in the fire, and quench'd it as often in diuretick waters, enliven'd with Spirit of Salt or Vitriol; for by this means you may have a liquor, very fit to be made use of to open the passages of the Urine; and a pouder of Crystal quench'd, good against weakness of the stomach and intestines, or to qualify the sharpness of Acids, and the Acrimony of the humours.

As to the Tincture which is forcibly extracted out of Crystal, after you have calcin'd it a long time with corroding Salts, and put it with them in fusion, we must attribute the red colour rather to the union, which the long digestion has produc'd of the most volatile parts of these Salts, with the Sulphury Spirit of wine, then to the substance of the Crystal dissolv'd in those Salts; in regard the same thing happens to Salt of Tartar digested with Sulphury Spirit of wine, without any Crystal being mix'd with it.

But after all these considerations, there is great reason to fear, least the Chymical preparations which may be made of Crystal after its being reduc'd to a Lime, may not rather incline the matters which they meet with, in the passages of the Urine to Petrification, then dissolve or drive them forth, as it is intended they should do. For it is a hard matter to perswade a man, that the petrifying Ferment of these sort of Limes change their nature by the preparations which others make of them; or that they may not produce effects quite contrary to those for which they seem to be absolutely provided.

I see no necessity for me here to set down particular preparations of Flints; for besides that they require no other, but the same as Crystal, there is as much reason to fear the effects of their petrifying Ferment, as of that of Crystal.

CHAP. VIII.

Of the Preparation of Coral.

NO man contests but that Red Coral carries the preeminency above all other Coralls. And therefore that all Authors have practised their principal preparations upon this Coral; touching which I am of the judgment, as in reference to Crystal that it is better to stick to those preparations that are more simple, and less destructive.

The ordinary Pharmacy very judiciously reduces Coral into pouder almost impalpable, grinding it upon Porphyry as it does other precious Stones. But it may be better done by making use of the Engine which *Monsieur Joel Langelot*, a most worthy Physitian to the Duke of *Holsatia* imparted to us, the figure whereof I have giv'n you in this Pharmacopœa.

For Coral having nothing in its substance which can serve to the purposes for which it is made use of in Physick, there is nothing requir'd but to open the body of it well, and all its parts, and to divide them almost into Atoms, which may be done by means of that new Engine; the effects whereof are so much the more recommendable, as being a great furtherance to all other preparations, which whether well or ill done, are attempted upon this mix'd body.

Actual Calcination of Coral, and reiterated Extinctions merit the name rather of destruction then of lawful preparations, as I have already made out in the Chapter of Crystal.

Solutions made in acid Spirits more or less corroding, to extract the Salt or Magistery, are as little to the purpose, because it is a potential Calcination, and for that there is no reason to expect any real Salt out of Coral, but only the Salt of the Menstruum embody'd with its proper substance. And because the Magistery which may be forc'd to precipitate in these dissolutions, is only the most earthy part of the Coral, it must give way to Coral finely pouder'd, that has suffer'd no torture, nor lost any thing of its substance.

As for the numerous preparations of the Tinctures of Coral, with which ſome Authors are ſtuft; though we may find ſome that have ſome appearance of Truth, and benefit, yet can they not be altogether entitled Legitimate, eſpecially when the Coral is expos'd to the violence of the fire, or to corroding Salts or Spirits. For beſides that it is impoſſible that the Coral ſhould communicate its colour which it has loſt by the violence of the fire, or corroding Spirits, we muſt not look upon the red colour which appears in ordinary Menſtruums to be other then an effect of long digeſtion. We muſt believe alſo that it is not a ſmall matter to ſeparate the red colour of Coral, and to carry it into another ſubject with its principal vertue.

The Freturation of Coral by means of the Engine of *Monſieur Langelot*, is incomparably much better, then all the Calcinations that can be made uſe of. For without changing the nature or the qualities of the Coral, it facilitates its diſſolution, and provides a way to accompliſh what is intended by means of more gentle Menſtruums. Among the reſt by the Spirit of Honey and Turpentine; by juice of Lemons, Barberries and the like, by thoſe of ſeveral woods, by thoſe of Salt and Vitriol dulcify'd, and united with Spirit of wine, and by the laſt enliven'd with Flowers of Sal Ammoniack, or ſome other Salt, and they may more eaſily after this in a Cornute extract the ſpecious Tincture of Coral, then as ſome have practiſed by mixing it with equal parts of Sugar-Candy. And therefore raw Coral beaten to an impalpable powder, and giv'n in ſome Liquor or otherwiſe, is far ſuperiour then all the Tinctures of it; though theſe are leaſt to be rejected, where the Coral has been diſſolv'd with leſs violence, and whoſe Menſtruum was leſs corroding, and may be the moſt ſecurely taken inwardly.

The little eſteem I give to theſe Tinctures has kept me from ſwelling this Chapter with their preparations, of which you may ſee a great number in *Scroderus*, *Grullengius*, and ſeveral other Books. I ſhall only inſert that which *Monſieur Langelot* has ſome while ſince imparted to publick view, as well for the particular eſteem which I have for his learning and knowledg, as for the ſoftneſs of the Menſtruum which he makes uſe of, the vertues of the fine Tincture which ſeem to appear in his preparation, and the hopes I have of it's ſucceſs upon the word of ſuch a Man.

This Author ſays, that having for ſome years before pour'd upon certain whole fragments of Coral an oil which he thought to be the gentleſt among thoſe which are drawn from Vegetables, with a deſign to try whether or no he could draw any Tincture from them, a good while after perceiv'd that neither the Oil nor the Coral had ſuffer'd the leaſt change, and ſo being out of all hopes, neglected the veſſel that contain'd them. But the winter being paſs'd, and he buſy about other Operations which he was experimenting in a Furnace of digeſtion, he remember'd himſelf, and put the Veſſel containing the Coral into the ſame furnace; and about a month after ſtirring the ſubſtances as he was wont to do, he perceiv'd that the red colour of the Coral was ſomewhat height'nd, and that the Coral was grown ſofter, though the Oil were not chang'd at all. Then continuing digeſtion with the ſame heat of fire, he found ſome days after that the Coral was diſſolv'd, and turn'd into a Muſcilaginous kind of ſubſtance, and that very red, though the Oil that ſwam above it had not chang'd colour. He ſays morever that he could not change the ſaid Oil, nor unite it with the Muſcilaginous matter, what ever ſtirring or digeſtion he us'd afterwards. For the Oil remain'd at the top, and the Muſcilaginous matters deſcended to the bottom. He affirms moreover, that finding the oil to be of the ſame ſcent and taſt as before, he pour'd it into another veſſel, and having pour'd the Muſcilaginous matter, the Spirit of wine Tartariz'd, and ſo leaving a very little while to digeſt, the whole ſubſtance diſſolv'd into a very red Tincture; which he attributes to long digeſtion, and the great effects which volatiles are able to produce, when you have put a ſtop to them. Some think that he made uſe either of the diſtill'd oil of Aniſe, of Citron peel, or Juniper berries to ſoften the Coral, and to diſpoſe them to yield their Tincture.

I cannot boaſt to have tryed this preparation, but I intend it in a little time; I believe alſo that the ſucceſs correſponding with the writings of *Monſieur Langelot*, as there is great probability of it. This Tincture of Coral ought to paſs for the beſt and moſt legitimate that ever was invented, and that with much more reaſon, thoſe vertues may be attributed to it, which have been allow'd to the other Tinctures, as well to ſtrengthen the heart and liver, as well to open the obſtructions of the

latter,

latter, and to redreſs all its diſtempers, as to purify and renew the whole maſs of the blood, and to give notable relief in diſeaſes that happen from its alteration. It is no leſs priz'd againſt weakneſs of the ſtomach, and of the inteſtines, which cauſe vomitings, Diarrheas, Dyſenteries, or Lienteries, and in all loſſes of blood either in men or women.

CHAP. IX.

Of the Preparation of Pearls.

THE engendring of Pearls in the Shells of certain Fiſh very much reſembling the nature of Oyſters, ſeems to make it reaſonable that we ſhould place them among Animals; if their whiteneſs, luſtre, hardneſs, weight, and ſolidneſs of their parts, did not place them in the rank of the moſt precious ſtones. Theſe qualities have been the reaſon that Phyſick has from time to time conceiv'd a very good opinion of them, and has believ'd that their vertues, if not ſuperior, yet are not inferior to thoſe of any precious ſtones. This conceit has encourag'd ſeveral Chymiſts to make ſeveral preparations of them, and has caus'd them to fall into errors as dangerous, if not more then thoſe which concern Coral. Operating here upon a ſubſtance of far greater price, and not only more pure, and brought to a higher perfection by nature then Coral, but which is much more qualify'd to receive with eaſe all ſorts of good or bad impreſſions.

Ordinary Pharmacy grinds Pearls upon Porphyry, moiſt'ning them with Roſe-water, or ſome Cordial-water, and like Coral and other precious ſtones. This preparation, though very plain, is much better then ſome which the Chymiſts have invented, provided you break the Pearls whole upon the ſame Porphyry, and that you continue to grind them, till they are pulveriz'd to an exact fineneſs. To which purpoſe there is nothing like Monſieur *Langelots* Engine. For Pearls retaining ſomething of the nature of Animals, and being of a ſubſtance in part volatile, they compleat their diſſolution in the heat of the ſtomach, or rather by the operation of the *Archeum*, eſpecially when they are finely pulveriz'd, ſo that by a quick digeſtion, what they contain of moſt eſſential, is ſuddenly convey'd to the heart, and to the parts which have need thereof.

But to ſatisfie thoſe that believe that Pearls are in a better condition to impart their vertues when they are diſſolv'd into liquor, they muſt underſtand that Pearls may be diſſolv'd in the juice of Lemons, well purify'd by digeſtion; which may eaſily be brought to paſs, by putting into a Matraſs or a glaſs Cucurbit, about an ounce of Pearls well ground upon Porphyry, and pouring upon it the juice of purify'd Lemons depurated, three fingers above the ſubſtances, and placing the Veſſel in a temperate Sand-bath, where it is to be left three whole natural days, ſtirring the ſubſtances from time to time; after that pour out the clear liquor by inclination, filter it and put it up in a Bottle, mingling with it the ſame meaſure of Spirit of Roſes. This liquor is to be taken in Cordial-waters from eight or ten drops to twenty or thirty. You may pour new purify'd juice upon the Pearls that remain in the Veſſel, and having made maceration, proceed in all things as before; and reiterate the ſame operations, till the Pearls are almoſt quite diſſolv'd.

For the Salt and Magiſtery of Pearls, of which ſome Authors make ſo great an account, they are neither the one nor the other more to be valued then thoſe of Coral. For the firſt is nothing but the Salt of Vinegar diſtill'd, embody'd with the ſubſtance of the Pearls which it diſſolv'd; and the latter only the terreſtrial part of the Pearls, depriv'd of their pure ſubſtance, which the Diſſolvants and Precipitants have got to themſelves.

The Oil or Liquor of Pearls, drawn forth for want of its Salt, is no better, for the ſame reaſons; no more then the Eſſences, Tinctures, Arcanums, Flowers, or Spirit, which are drawn forth by the help of corroding Menſtruums, which are rather Deſtructions then Preparations.

Pearls beaten to fine pouder are recommended to ſtrengthen and comfort the heart and the Noble parts, to reſiſt Poiſon, the Peſtilence, malignant Fevers, and to reſtore perſons that are feeble and languiſhing. It is giv'n in Cordial waters or in broth from half a ſcruple to half a dram. It is mix'd in Tablets, Opiates, Potions, and ſeveral other remedies. The vertues and uſe of Pearls diſſolv'd in the juice of Lemons, and in Spirit of Roſes, are very near the ſame.

This occaſion of Pearls obliges me to tell my thoughts of the Chymical preparation of Emraulds, Saphires, Jacynths and other precious Stones; which is, that their ſubſtance being exceſſively hard, eſpecially if they be fine and clear; and not being to be diſſolv'd but by potent Corroſives, it is much better to let them alone upon your finger, in regard it is impoſſible to uſe thoſe violent means without deſtroying the good qualities of the ſtones. I think it alſo much better to grind them upon Porphyry, like Pearls, till they are exactly fine, to which purpoſe you may make uſe of *Monſieur Langelots* Engine, to make uſe of them ſo upon all occaſions. Though if credible Authors may be believ'd, the Stones have a quality to impart their vertues without preparation being worn in Rings, about the neck or arms, ty'd upon the legs or thighs, or others apply'd to other parts of the body, like other ſtones of leſs value, as the Eagle ſtone, the Nephetick ſtone, and ſeveral others.

CHAP. X.

Of the Preparation of Talk.

TAlk, with the addition of Venetian, ſhining and ſilver-like, when it is divided as it may be into tender ſcales, but almoſt of a Sea green when it is quite whole, is that which of all the true or falſe Talks is moſt eſteem'd, and about which a great number of people have exercis'd themſelves from time to time, eſpecially to draw forth an oil, which is eſteem'd to be beyond all the Coſmeticks in the world and is thought to lie conceal'd in its ſubſtance, becauſe of its ſweetneſs, and unctuoſity which may be perceiv'd by handling it, though it do not daub the fingers at all. I paſs by the opinion that ſome have, that Talk red or yellow, contains in it ſelf a Mine of Gold, and that a proper menſtruum may be drawn from it for the tranſmutation of Metalls into Gold or Silver, and for the fixation and Tincture of Mercury; as alſo that it contains an univerſal medicine, able to cure all diſeaſes that are tak'n to be incurable. I ſhall only ſay that the preparation of a true oil of Talk is no leſs difficult then the Tranſmutation of imperfect Metalls into Gold or Silver, of which many have, and ſtill do boaſt, though the Talent which they pretend to, is not able to free them from the miſeries that uſually attend them to the end of their lives.

Calcination of *Venice* Talk, of all its preparations has been moſt ſought after, and for which they have made uſe of all ſorts of fires, the moſt tedious and moſt violent, even thoſe of glaſs Houſes. Expoſing the Talk, ſometimes alone, ſometimes mingl'd with Silver, Copper, Lattin, Sulphur, Lime, Tartar Salts, and other corroding ſubſtances. For though there be in *England* a Talk proper to be calcin'd alone and to be reduc'd in leſs then an hour to a very white and crumbling Lime, and that there be in *France* of thoſe falſe Talk's that will not endure the fire; yet they can never promiſe to themſelves the ſame thing from that of *Venice*, but by expoſing it above a quarter of an hour to a flaming fire, and making an Iron Mortar almoſt red hot together with one end of the Peſtle; and then indeed they may reduce it in a ſmall time to pouder and that very fine, which may be preſently ſifted through a ſilk'n ſeirce, fit to be mix'd with Pomatums and other Coſmeticks.

This Talk thus pulveriz'd may be ſtrew'd among ſhell ſnailes, and left in a glaz'd Pipkin till they have ſuckt it up all; then having bruis'd them, with all their ſhells, and put them into a Glaſs Cucurbit, cover'd with its head, diſtil the whole maſs, and there will come forth a water, very proper to clear Complexions of Ladies.

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They who mingle Salts among Talk, to assist and forward Calcination, are wont to expose it to the moisture of a Cellar, after they have expos'd it, or else in the open Air, to procure a Liquor, which they call oil of Talk; But very improperly, in regard that Liquor is nothing but a Salt dissolv'd in the moisture that has got within it, and is impregnated with particles of the Talk, which it has corroded and dissolv'd.

Crollius, and some other Modern Authors in imitation of him, thinking to do better, direct you to prepare a Spirit of Vinegar of *Spanish*-Wine, and to have it more penetrating, to choose that which distils from the last half of the Vinegar; and after you have divided the *Venice*-Talk into thin pieces, to put them into a Matrass and moisten them well with Spirit of Vinegar, till the substances are at length become Mucilaginous, and as it were Oil, to the end you may thereby know the dissolution of the Talk. After this they direct you to put the whole into a Luted Cornute, set in a close Reverberatory; to which having fitt'd a large Ricipient, first with a gradual fire they draw off the Spirit of Vinegar, then the white Oil; the effects whereof are to beautifie the Complexion, and will remain above a month after single Unction.

The little likelihood of succeeding in this Operation, hinder me from making the Experiment; and therefore I will neither promise nor warrant any real Oil of Talk. Nor will I undertake to Calcine true *Venetian*-Talk in half an hour with a small fire, and to make it spungy, and in a condition to be rubb'd between the fingers into an Impalpable Powder, as *Monsieur Morhosius*, in his Epistle Treating of the Transmutation of Metals, dedicated to *Monsieur Joel Langelot*, assures us. Though I will not deny the possibility, since there is some reason to hope that so Famous a Man will one day Communicate in Publick a Preparation of so much Curiosity.

CHAP. XI.

Of the Preparation of Common Salt.

SAlt generally taken, is as it were the Foundation, Soul, Subsistence, and the Principal Secret of the Life and Preservation of all mix'd Bodies; there being no mix'd Body that has not its proper Salt, more or less in quantity, and which does not lose it's principal Qualities, when it loses its Salt. But we are to look upon the Sea-Salt as the most abundant in Nature, and as the Foundation and Seed of all other Salts. For being dissolved in a vast quantity of Water, and in a posture ready to be convey'd to all parts of the Earth, either through the Subterraneal passages, or by the rains proceeding from the vapours rais'd by the Sea; all other Salts borrow from it their Principal parts, not alter'd from it, but only in the change of Form, and the Situation of these parts, or by the Dissolvable substances that are mix'd with it, and make the diversity of Salts. For Vitriol, Niter, Alum, and Sal-Armoniack, have all of them some parts of the Sea-Salt for their Foundation; nor are they diversify'd, but by the strange bodies which they have met with and diss-solv'd, or they are Artificially blended. Sal-Gemm ought to be accompted a real Sea-Salt, depriv'd of the most part of its moisture, and coagulated by the Subterraneal heat, or by that of the Sun. That which is drawn from Salt Fountains, is much of the same nature with Sea-Salt, as coming from the Sea through Subterraneal passages: their great difference consisting in the manner of separating their moisture; considering that we make use of fire to evaporate fresh water, of Fountain Salt; whereas in hot Countries, they make use of the heat of the Sun to consume the moisture of the Sea; which Salt is most esteem'd, because it suffers less alteration in its parts, then that which has endur'd an ordinary fire.

The use of Sea-Salt is much more for the seasoning of Meats, then for Physical preparations; and the first preparation of it, is to purifie it: To which purpose, having dissolv'd it in Fountain, or River Water, and filter'd this Dissolution through coarse Paper, evaporate the moisture in some Iron-Kettle, or Caldron, till the Salt remain white and Crystallime at the bottom of the Vessel. This way of purifying

serves

ſerves not only to ſeparate the Earthy parts of the Salt, but it qualifies its Acrimony, and makes it fitter for all ſorts of uſes, eſpecially for nouriſhment; above all if you reiterate Diſſolution, Filtration and Coagulation.

But becauſe that notwithſtanding the firſt and ſecond evaporation of the Salt, there ſtill remains ſome particles of water in its proper ſubſtance, and that the ſtrict Union of the Acid with the Alkali, the cloſe binding of the parts, and the Cubick figure of the grains of Salt, ſo ſtraitly encloſe theſe particles of water, that having expos'd theſe grains to the fire they cannot get out, but by offering violence to their bonds, and by cauſing the parts of the Salt to leap with a kind of flaſhing; and for that overmuch of that leaping and flaſhing of the Salt might chance to break the Glaſs, where the Salt is put to diſtil, there is a kind of Calcination or drying us'd, which is call'd *Decrepitation*, becauſe of the crackling of the Salt while it is over the fire: and becauſe that Crackling is either more or leſs according to the bigneſs of the grains, having dry'd the grains of Salt in an Oven after the bread is out, bruiſe it in a Morter, and put it in a pot that is able to endure the fire, and placing it in a Furnace over a good Coal-fire, and ſtirring it from time to time with a long Iron Spatula, let it ſtand ſo till the Salt has done crackling, which is an evident ſign of the diſſipation of the particles of water, which were mix'd confuſedly among the Eſſential parts of the Salt. Which you may ſooner bring to paſs, if when you beat the grains of Salt in a Matraſs, you beat them ſo ſmall, that the Alien particles of the Water may the more eaſily iſſue forth. As touching the fuſion of Salt it is more facil, then neceſſary. For they that will have it ſo need no more but put the Sea-Salt powder'd into a Crucible, and expoſe it to a Melting or Fuſion-Fire, which hinders not but that you may at any time diſſolve it in water, both before and after this operation.

CHAP. XII.

The great Inclination that Sea-Salt *has to Fuſion.*

THE impoſſibility for any Cornutes of Earthor Glaſs to continue this Salt in Fuſion long without breaking, and the ſtrict union of the Spirits with the other ſubſtances, while the Salt is in Fuſion, enforce us to make uſe of other ſubſtances, by the mixture whereof we divide the parts of the Salt, and preventing Fuſion, conſtrain it to ſurrender its Spirit by the ordinary ways.

Not but that you may extract an acid Spirit of Salt without Addition, if after a perfect Decrepitation of the Sea-Salt, and after you have kept it a long time over the fire, you expoſe it afterwards to the Air for ſeveral days; for the more fix'd part of the Salt having loſt over the fire the moſt part of its Acid, and being as it were famiſh'd eaſily impregnates it ſelf with the Acid Salt of the air which embodying with this Salt, augments its quantity. And becauſe the acid Salt of the Air is naturally more volatile then the acid of the Sea-Salt, and becauſe it eaſily ſeparates it ſelf without the helf, it is no difficult thing to diſtil it without Addition. But the Spirit which is drawn from it, being almoſt nothing elſe but this acid of the Air, there is no reaſon to call it the Spirit of Sea-Salt, nor to account this Preparation, no more then ſuch an augmentation of this Salt for any great Miſtery; in regard the ſame corporifying and augmentation happen to Allum, Niter and Vitriol, by the conjunction of a new acid, when you have drawn off its Spirit; and for that Lead, Antimony and ſeveral other more compacted bodies then Sea-Salt, augment by means of the Air, which pierces into their pores inſtead of the other ſubſtances which the fire had driv'n away.

Take two pound of Sea-Salt well-dry'd and ponder'd, and eight pound of Potters-Earth, or Bole, or earth of *Blois*, pulveriz'd in the ſame manner; and after you have well mix'd one of theſe Earths with two pound of Salt, put the whole into an Earthen Cornute well luted, ſo large that about a third part may remain empty:

place

place the Cornute in a close Reverberatory, and stop the Register of the Duomo; kindle a small fire of Coals in the fire-place, enough to heat by degrees the Furnace and the Cornute; and having continu'd it so for an hour, begin to increase the fire insensibly, and after that from degree to degree; opening by little and little the Register of the Duomo on the side of the neck of the Retort; and when the flegm distils, keep the fire in the same condition, till you see certain white vapours come forth from the neck of the Cornute. At which time fit a large Recipient to it, and having carefully luted the closures, encrease the fire still by little and little, and proportionably open the Register of the Duomo, encreasing yet more the fire from degree to degree to the utmost violence, till you see that no more vapours come forth of the Cornute, and that the Recipient becomes clear. Then giving the Vessels liberty to cool, and having unluted the Recipient, you shall find a yellow acid Spirit, of a very pleasing colour, accompany'd with some flegm, and in the neck of the Recipient some little volatile *Sal* fix'd to it.

You may also instead of drying the Sea-Salt, dissolve it in water, and having made a kind of a pickle, imbibe the same Earths or Bole in it; then having made a Paste of it, somewhat solid, make it up in little Balls as big as will go into the mouth of the Cornute; and having perfectly well dry'd them in the Sun, or in the open air, fill the two thirds of a Cornute; then observing my last directions, you shall draw forth a Spirit like that already mention'd.

Some there are that cohobate this Spirit upon that which remains in the Cornute, and after they have made the mass into little Balls and dry'd it, they make a new distillation, reiterating several times the same cohobations and operations, the better to separate the spiritous part of the Salt from its body. And for that this Spirit contains very much flegm, you may pour it out into a small glass Cucurbit, and having plac'd it in *Balneo Mariæ*, and cover'd it with its head, and fitted to it a small Recipient, rectifie it over a gentle fire. For by this means the flegm ascending first, will leave the acid Spirit at the bottom, which will be more or less penetrating, according to the quantity more or less of flegm which you have separated by rectification. 'Tis requisite to save this flegm, for notwithstanding the soft heat of the Bath, it has carried with it some of the acid volatile particles of the Salt; which not only render it diuretick, but also proper to allay the heat of cholerick Fevers. You may also concenter this Spirit by rectifying it in a Sand-bath, when you desire to make it fit for the dissolution of Gold.

There is also a Spirit of Salt to be prepar'd, by mixing two pound of Alum, burnt to powder, with three pound of Salt well dry'd and powder'd, and distilling them together through a Cornute the ordinary way. But the Spirit participates as well of the one as the other; however it may serve for several precipitations, and is a powerful opener and diuretick.

You may also mix equal parts of Sea-Salt and Salt of Niter, well dry'd and powder'd, with four times as much of their weight of Bole, or Potters earth Pulveriz'd, and after you have put them into a Retort, set them into a close Reverberatory. Thereby you shall draw forth a Spirit compos'd of two Salts, commended not only for the cure of the Dropsie, and to consume the proud flesh of Ulcers, but for the immersive calcination of Gold and Silver.

Some Authors have pretended to prepare a Spirit of Salt impregnated with the vertues of Coral, mixing with the Salt the Coral ground upon Porphyry, instead of Potters-Earth, or those other substances which are made use of in the distillation of it; but the acid part of the Salt acting more inwardly upon the Corals then it could do upon the Earths, corrodes them, and in corroding embodies it self with their parts; so that resting in the Cornute, there can be nothing expected but an unprofitable flegm; and therefore it is more to the purpose separately to make use of the Salt, and the Corals, as occasion requires, then to mix them to no advantage.

CHAP. XIII.

Of the Dulcifying of the Spirit of Salt.

THE inconvenience which the acidity of the Spirit of Salt may bring to ſome perſons, eſpecially thoſe whoſe diſeaſes proceed from acids, have enforc'd moſt Artiſts to have recourſe to diverſe fix'd or volatile Salts, which they have mix'd with this Spirit to qualify their ſharpneſs and ſweeten their effects. For beſides that they mix with this Spirit Salt of Wormwood, and many other Salts of Plants, as alſo with the volatile Salts of Animals, to fix them, while it fixes it ſelf and incorporates with them; they mix it alſo with equal parts of Spirit of wine, the volatile and Combuſtible Salt whereof inwardly uniting it ſelf with the acid parts of this Spirit, makes one Compoſition of two, of a ſweet and pleaſing odor, and of a taſte leſs acid, the uſe and vertues whereof are incomparably better appropriated to the diſeaſes and to the habitude of ſeveral perſons then the ordinary Spirit of Salt. For which reaſon it is call'd the ſweet or Dulcify'd Spirit of Salt. For the preparation whereof, fill about two thirds of a Glaſs-Cucurbit, with equal parts of Spirit of Salt and Spirit of Wine, and having plac'd it in a *Sand*-bath, and cover'd it with its head perfectly well-luted, with a Receiver luted in the ſame manner, begin your Diſtillation with a moderate fire, which you muſt continue, till the whole be almoſt diſtill'd. Then having cool'd the Veſſels, and pour'd out the diſtill'd Liquor into a new Cucurbit, re-diſtil it in the ſame Bath, and reiterate the ſame operation the third time. By which means theſe two Spirits being perfectly well-united together will produce effectually the advantages expected from their Union.

All Authors highly recommend the *Spirit of Salt* to open the paſſages of the Urine, to cut and looſen Viſcous and Tartarous Matters, and to open the obſtructions of the Liver, *Spleen*, and the reſt of the Bowels. For which reaſon it is ſucceſsfully preſcrib'd in Dropſies; and in diſeaſes that proceed from obſtructions of the Veſſels. In all which caſes the Dulcify'd *Spirit* is highly to be preferr'd before the other. Both the one and the other are very good to quench Thirſt, giving them from five or ſix to twelve or fifteen drops, in ſome proper Liquor. Or elſe you may put as much as will yield a pleaſing ſharpneſs in your ordinary drink. This *Spirit* is very good to kill Childblains in the hands or feet, before they come to be ulcerated; anointing the part affected with a Feather. It is alſo good to cleanſe and make white the Teeth, to take off the rottenneſs of the Bones, and to conſume the proud fleſh of Wounds and Ulcers. The firſt Spirit of Salt well-rectify'd is us'd for the diſſolution of Gold. It is uſeful alſo for the precipitation of Minerals diſſolv'd in Aqua-Fortis or with Spirit of Niter. But you muſt not impute this precipitation to the weight nor the force, nor to any juſtle or ſhog which it gives the Aqua-Fortis, or to the matters diſſolv'd, as ſome have thought, but through the Conjunction of the acid of this Spirit to the volatile and Sulphury Alkali of the Aqua-Fortis, or Spirit of Niter, which conſtrains the latter to abandon that part of the Mineral which it had diſſolv'd.

And to ſhew you that neither this nor any other precipitation happens through the weight or force, or any ſhog or juſtle, which this or any other Spirit can give to the Diſſolvant or the matter diſſolv'd, but that it is the reciprocal conjunction of Alkali's to Acids, or the enfeebling of the Diſſolvent, or the addition of ſome new Matter, which the Diſſolvant may penetrate afreſh, which cauſes the precipitation; we find that the Spirit of Salt not being able to unite it ſelf but with the volatile Alkali of the Aqua-Fortis, is not able to precipitate any more then what the Alkali had diſſolv'd; whence it comes to paſs that the precipitation is neither very quick nor copious, becauſe the acid part of the Aqua-Fortis ſtill retains that part of the Mineral which it had it ſelf diſſolv'd, not being able to unite with the Spirit of Salt. But if after the Spirit of Salt has done working upon the Mineral diſſolv'd you pour upon it the Liquor of Tartar or the fixt Salt of Niter, with which the acid of the Niter has a great willingneſs to unite, there will preſently follow a new precipitation, which will be more plentiful then the former. By which you may underſtand the true cauſe of the principal Precipitations, examples whereof you ſhall find in the following diſcourſe.

CHAP.

CHAP. XIV.

Of the Preparation of Salt *of* Niter.

SAlt of Niter commonly call'd Salt-Peter, or Salt of the ſtone, by others the *Dragon, Cerberus, Salt of Hell*, by reaſon of the violent effects which it is able to produce, is accounted a Sulphury Salt, becauſe of its quick diſpoſition to fire ſuch ſubſtances whoſe parts are mix'd with Brimſtone upon the fall of the leaſt ſpark of fire; though of it ſelf it will not take fire in a Crucible red-hot; unleſs you mix ſome Coal with it, the ſubſtance whereof contains ſomething of Sulphur. We find in Niter three ſorts of Salts, a volatile Sulphury Salt, a volatile Acid, and a fix'd Terreſtrial. Nevertheleſs the natural union of theſe three Salts is not ſo firmly knit, but that an Artiſt can ſeparate them at his pleaſure.

We find in *France* three ſorts of Salt-Peter, the one fix'd to certain Rocks or Walls in little white Cryſtals, the other mix'd among the Earth of certain Cellars, or ſome old Stables, and the third among Rubbiſh or the Ruines of old Walls.

The Salt-Peter-Men put theſe Earths or any other ſubſtances containing the Salt-Peter in great Cauldrons over the fire, with as much water as is convenient, and having made lyes of the Salts, they filter them, then they Coagulate the Salt, which they diſſolve, filter, and coagulate again, not only to make it more pure, but as much as in them lies to ſeparate it from the Salt of the Earth; which is uſually mix'd among it, and which lying under Peter the Salt, very much partakes of the taſt, ſhape, and nature of the Sea-Salt. The eaſineſs to procure Salt-Peter fine, is the reaſon why we never trouble our ſelves to depurate it. It being enough to chooſe it white, tranſparent, in long Cryſtals full of Angles, in length forming a kind of a Cylender. This Salt is of a Saltiſh acid taſt, with ſome bitterneſs. Beſides all theſe marks the purity of it is known by putting ſome little piece of it under Coals well kindl'd, and then if it conſume almoſt all away immediatly, ſo that there remain upon the Coals only a little white Salt, which is the fix'd Salt of the Niter. The Salt-Peter firſt Chryſtalliz'd, and which is drawn from the firſt water, is that which has all the true Marks, and is eſteem'd the beſt.

The purifying of Niter makes it fit for all uſes, eſpecially to be taken inwardly. It is alſo the beginning of all its other preparations; of which the moſt frequent is that of its Calcination, the which is done more or leſs, according to the quantity, more or leſs, of its parts which you intend to ſeparate. That which is done for the preparation of Mineral-Cryſtal is the ſlighteſt. For then it ſuffices only to put one pound of the beſt Niter in a Crucible, ſet upon a Trevet in a Furnace, in the midſt of live-Coals; where having melted it, caſt upon it at ſeveral times one ſingle ounce of Flower of Brimſtone, which you muſt cauſe to burn and conſume upon the Niter; then pour it out ſpreadingly over the bottom of a clean Iron Skellet or Kettle, and having cool'd it, and broke it to pieces, put it up in a Glaſs or Gally-pot well ſtopp'd. They have alſo giv'n the name of *Sal Prunellæ* to Mineral Cryſtal, becauſe tis an excellent remedy againſt inflammations of the throat, eſpecially the Squinancy, which ſome call *Pruna* or *Prunella*, eſpecially when thoſe diſeaſes are caus'd by volatile Salts, and have but newly ſeiz'd the Patient. For the acid of the Niter uniting it ſelf with the volatile Salts, changes their nature and prevents their Effects. This Cryſtal is alſo call'd by the neme of *Mineral Anodine*, becauſe it is good to aſſwage pain, particularly thoſe that are caus'd by fix'd and volatile Salts. It is opening, diuretick, and proper to cut viſcous and Tartarous humours. It is mix'd among purgatives as a Vehicle; and in divers Menſtruums to aſſiſt in the extractions of the Tinctures of mixt bodies, and to highten the colour. It reſiſts putrefaction of the humours, and quenches thirſt and the burning of Fevers, taken in a ſmall quantity in convenient Liquors.

They who have been acquainted with the heat of the moſt volatile and Sulphury part of Niter, thought they did well to burn a top of it the flowers of Sulphur to conſume and carry that part away with them; which is grown into cuſtom, and is not to be rejected, becauſe of the good uſe which is made of it every day: though inſtead of that, you may make uſe of Niter it ſelf very pure and in Cryſtals.

CHAP. XV.

Of the Fixation of Niter.

All Salts in general being ſeparated from other ſubſtances, though diſſolvable in in Liquors, carry the name of fix'd, though they be in a condition to endure the fire. Which cannot be done but by ſtopping their volatile part with acid Spirits or Salts, or with other ſubſtances, which may incorporate with them, out of their particular diſpoſition to unite together. Niter being compos'd of a volatile Sulphury Salt, an Acid Salt ſomewhat volatile, and a fix'd Salt, it is a hard thing to find one *S*alt or one *S*pirit, able to fix all parts at a time. For if you mix only volatile *S*alts, ſome part of the other *S*alts will diſſipate with them. And if you make uſe of new acids to ſtop the *S*alts, the exceſs of the acids will cauſe the diſſolution, and change the nature of the whole. *S*o that go which way you will to work, in fixing the Niter, you muſt loſe a good part of its volatile part.

According to *Glauber* you may put three or four pound of good Niter in a large Iron-Crucible plac'd upon a Trevet in a proper Furnace, and having kindl'd Coals round about it, and forc'd the Niter to Fuſion, caſt upon it about half an ounce of pouder of Coals, which will immediatly take fire, and begin to diſſipate the volatile parts of the Niter. This half ounce of pouder being conſum'd, throw on as much more, and renew the ſame projection and conſumption, keeping the ſame fire, till there be little or no acid part left in the Niter, nor any thing at all combuſtible, till the pouder of Coals take fire no more, and the Niter look of a greeniſh colour enclining to blew. Then take the Niter out of the Crucible, while it is yet hot, you may if you think good put it up as it is in a double-glaſs bottle exactly ſtopp'd. Or elſe you may diſſolve it in water, and having made a Lye, Filter it and Coagulate the *S*alt, which you may put up as you did the former. This *S*alt having loſt in its Calcination with its Combuſtible volatile, almoſt all that it had of acid, you cannot Cryſtallize it in that condition, as you may Cryſtallize Mineral Cryſtal, which having endur'd only a ſlight Calcination, contains almoſt all its acid upon which depends Cryſtallization. However you may eaſily reſtore to it its Cryſtalline figure, by pouring *S*pirit of Niter upon its filter'd Diſſolution, till Ebullition ceaſe. For by conſuming afterwards this liquor to a Film, and leaving it to cool, you ſhall find Cryſtal like thoſe which the Niter had before it was put into the Crucible, and the weight and bulk of the Niter augmenting the Spirit which is impregnated with it.

Glauber directs that having calcin'd the Niter, as I have ſhew'd, with pouder of Coal, having tak'n it out of the Crucible, and put it into ſome convenient veſſel, you ſhould expoſe it to the moiſture of the Air, or Cellar, till it be diſſolv'd into Liquor, to which he gives the name of *Alkaheſt*, pretending to make a Univerſal Menſtruum thereof, by means of which to extract Tinctures from all ſorts of mix'd Bodies, as well Vegetables as Animals and Minerals. But though it may be made uſe of for the Menſtruums of ſeveral Minerals; yet there are others much more gentle for Vegetables and Animals.

Some perſons diſſolve Niter thus calcin'd in Spirit of Vinegar, filtring the Diſſolution and Coagulating the Salt, reiterating three times, Diſſolution, Filtration and Coagulation. Then having diſſolv'd this Salt in good Spirit of Wine; and having put the Diſſolution into a Glaſs-Cucurbit cover'd with his head well-luted, with a Receiver well luted to it alſo, they draw forth the Spirit of Wine in a Sand-bath with a moderate fire, to the dryneſs of the Reſidence, and find at the bottom of the Cucurbit a Scaly Earth like Talk, meltable in the fire like Wax, containing the fix'd Salt of Niter, impregnated with the acid of the Vinegar. Which remedy he recommends to open the obſtructions of the Liver, Spleen, and Meſentery, giving from one *S*cruple to two in opening Liquors, or elſe mix'd with Purgatives.

CHAP.

CHAP. XVI.

Of Salt Polychreſtes.

I Add to the fixation of Niter the preparation of Salt *Polychreſtes*, becauſe that by its means the Niter becomes fix'd, loſing all that it had of volatile. The invention of this Salt is not ſo ancient as the word *Polychreſtes*, which ſeveral Authors formerly gave to Pills, and other Compoſitions proper to purge ſeveral bad humours at a time; for we find but ſome new Writers who have mentioned it, and propos'd the uſe of it, though it be now more common in *Paris*, then a great number of other preparations with which the ancient Volumes are fill'd.

To prepare this Salt after the ordinary manner, take equal parts of good Sulphur and Niter in Cryſtals; and having coarſely powder'd them, ſet a large Crucible upon a Trevet in the midſt of the fire-place of a Wind-Furnace, where having kindl'd a good Coal-fire round about it, and heated the Crucible red-hot, throw in about an ounce of the powder, which will take fire immediately, and the Sulphur conſuming it ſelf, will carry away with it the volatile part of the Niter; the flame being over, make the ſame projection of the powder into the Crucible, which you muſt reiterate from time to time, ſtill giving the Sulphur time to conſume it ſelf, and ſtirring the ſubſtances by intervals with a long iron-Spatula. Thus continue to do, till you have projected all the powder, or that the Crucible can contain no more. After which having continu'd the fire for two or three hours, leave the Crucible to cool, take out the powder and diſſolve it in water; and having filter'd and evaporated the diſſolution over the fire, till it be cover'd with a film, leave it to cool; then having pour'd out by inclination the liquor that ſwims at the top, into a ſmall Cucurbit, you ſhall find the Salt *Polychreſtes* at the bottom, and about the ſides of the Veſſel, whence you are to take it forth and dry it. Afterwards evaporate it in a Sand-bath over a moderate fire, the liquor which you pour'd into the ſmall Cucurbit, till it be cover'd with a film; then take out the ſubſtance and dry it, as you are to do the firſt. Thus you muſt do with the liquor that ſwims above the Salt, to make the beſt advantage of that which remains; afterwards mingle and keep all the Salts for your uſe.

The diſſipation of the acid and Spiritous part of the Niter, during its Calcination with the Sulphur, is the reaſon that the Cryſtals which you take forth loſe the form which thoſe of the Niter had, before they were put into the Crucible. Nor could you have it in Cryſtals, had not the Salt retain'd ſome part of the acid of the Sulphur, during its Calcination with it.

But for as much as the Salt *Polychreſtes* prepar'd in this manner, contains in it only the fix'd part of the Niter, and ſome part of the acid of the Sulphur, and that it cannot act in this condition but only by the Salts, like Salt of Tartar, and other fix'd Salts. You may make it beſides that partly Diaphoretick, and partly Diuretick, by adding and incorporating four ounces of Salt Armoniack, with a pound of Salt *Polychreſtes* prepar'd as I have ſhewn, and cryſtallizing them together again in a glaſs-Cucurbit plac'd in a Sand-bath over a moderate fire. For the proportionable union of theſe two ſubſtances, will produce a compoſition much more deſerving the name of *Polychreſtes*, then that whereof I have deſcrib'd the preparation. For whereas the firſt works with Acrimony enough, and does not take the right Road of the Bowels, the Salts of the latter being reciprocally dulcify'd by uniting themſelves together, operate in all things with much more gentleneſs. Not but that they eaſily penetrate the parts of the body, which have need of their operation; eſpecially the parts of the Urine, the Veins, the Arteries, and alſo the fleſhy parts, without leaving any impreſſion of Acrimony.

Both the one and the other of theſe Salts are mix'd together from half a dram to a dram among ſeveral remedies, eſpecially among Purgatives to quicken their vertue, mixing them in five or ſix ounces of Liquor. They are alſo given alone from two or three drams to five or ſix, in two or three pints of River-water, or in ſome Ptiſan, to be drank at ſeveral draughts as you drink Mineral-Waters, for the cutting and looſening of groſs humours, when you would expel them by the ordinary ways

CHAP. XVII.

Of the Spirit of Niter.

YOU ſhould, according to the directions of ſome bruiſe, in a Mortar and mingle together two pound of Niter, and ſix pound of common Bole, and having made up a paſte ſomewhat ſolid with a water impregnated with Niter, which it has diſſolv'd, make little Balls thereof; and having dry'd them, diſtil them through a Retort according to the ordinary Method. But the beſt way and leaſt troubleſome is this. Having beaten in a Mortar and mix'd together two pound of very good Niter in fair Cryſtalls, and four times as much the weight of Potters-Earth, exactly dry'd and beaten to pouder, put them into an Earthen Cornute or Retort well luted about, ſo large that the ſubſtances may not fill above two thirds of the veſſel, and having plac'd it in a cloſe Reverberatory, and fitted and well luted a large Recepient to the neck, make your diſtillation with a Gradual fire, increaſing it from three hours to three hours, and at length to the utmoſt violence of heat; continuing it ſo, till you perceive an apparent diminution of the redneſs of the Spirits in the Recipient, and that the heat of the Receiver be ſenſibly abated, which will fall out after you have given the laſt fire for three hours. After which, having ſtopp'd up the Regiſter of the Duomo, and the Dores of the fire and Cinder place, and left the Furnace and the Veſſels to cool, unlute the Recipient, moiſtning the Lute with a wet cloth, and taking it away from the neck of the Cornute, empty the Spirit of Niter into a double Glaſs bottle, which muſt be carefully ſtopp'd, and keep it for your uſe. You may receive apart the watry part of the Niter which comes out firſt in Diſtillation, forbearing to lute the Recipient till you have drawn it forth. And by this means you will have a Spirit of Niter that will work with much much more force, then that which is mix'd with its Flegm.

The Sulphury Salt part of the Niter, being joyn'd to the acid part comes forth out of the Cornute in red vapours, and diſſolves it ſelf into Spirit; which has occaſion'd ſeveral writers to give it the name of Salamanders blood. Niter is alſo the only Salt that yields its Spirit in redvapours, the Spirits of all other Salts coming forth in white vapours. They that receive all together in one Recipient all that comes out of the Cornute or Retort in diſtilling Niter, find almoſt as much weight of the Liquor, as they had put in Niter into the Cornute. So that they who believ'd that all the Niter paſs'd off into *Spirit* had no reaſon to think ſo. For beſides that the Earth which is mix'd therewith yeilds, for its own part, much Flegm is this diſtillation, as alſo in that of the *Spirit* of *Salt*, it fails not alſo to unite to it and to retain in the place of its Flegm the fix'd part of the Niter. Whereas it cannot do this while it is alone, but unleſs it be mix'd with its proper fix'd *Salt*, or with that of the Tartar, or with ſome other of the ſame nature. By which you may judg of what it wants to reſume its natural condition, ſince that if you would have it reſume the body from whence it iſſu'd forth, you cannot do it without joyning to it a fix'd *Salt* of the ſame nature with that which remain'd in the Cornute at the time of the Diſtillation.

The Spirit of Niter is highly recommended againſt Malignity of Fevers, as alſo to ſuppreſs the Vapours thar riſe from raw Nitrous, and Tartarous matters; and to calm the boiling of the humours, by reaſon of its volatile Sulphury Salt united with its Acid. It is alſo an excellent remedy againſt Cholicks. It opens the obſtructions of the Liver, Spleen, and all the Bowels; it diſſolves curdl'd blood; and expells by ſweat, or by inſenſible tranſpiration, the humours that are to be that way expell'd; which makes it highly eſteem'd againſt falſe and real Pleuriſies, againſt Rheumatiſms and all ſorts of moving pains, and the Dropſical Tympany. The doſe is from half a ſcruple to one ſcruple, and alſo to half a dram in proper Liquors.

The ſharp and gnawing parts of the Spirit of Niter render it fit for Corroſion, as alſo for the diſſolution of all Metals, except Gold. Into which it cannot enter alone, becauſe of the ſmallneſs and ſhape of the pores not able to give entrance to the parts of that Spirit, the bigneſs and ſhape whereof are very unfit for that purpoſe. Though you may bring it about, if you add the fourth part of its weight of Salt-Ammoniack, of *Sea-Salt* or *Sal-Gemmæ*, which cauſing a new change of its parts,

or

or forming them into ſubtle points, or a figure capable to enter into the pores of the Mettal, make it fit to penetrate and diſſolve the ſubſtance. It alſo diſſolves ſeveral Minerals, and changes the emetick and purgative vertue of ſome into Diaphoretick, particularly Antimony.

The ſame Acrimony rendring this Spirit in ſome meaſure unfit for internal uſes, you muſt have recourſe to the Spirit of Wine, which is to be mix'd with it in equal parts, and a diſtillation to be made thereof in a Sand-bath in a glaſs Cucurbit, cover'd with its head carefully luted; which muſt be renew'd three times, to make an exact union of the parts of the Spirit of Niter with thoſe of the Spirit of Wine, proceeding after the ſame method as for the dulcifying the Spirit of Salt. And from this union ariſes a compos'd Spirit, not only more agreeable in its ſmell, but more ſweet to the taſte, and more gentle in all its operations, and more agreeable to our natures, and which is more than all this, more fit to ſhew its diaphoretick vertue then the ordinary Spirit of Niter. The gentle qualities which it has, have giv'n it the name of ſweet or dulcify'd Spirit of Niter. The preparation whereof may be very properly made in Veſſels call'd *Twins*, or double Pelicans (the figure whereof you may ſee among the reſt) placing theſe Twins in a Sand-bath over a very moderate fire, filling about half the body up with each of theſe two Spirits mix'd in equal parts; luting well all their orifices and cloſures, and making a mutual and continual diſtillation of the Spirits for three days together, which muſt be accompany'd with a continual cohobation of that which diſtils, upon the ſubſtances which ſhall lye ſucceſſively in the bottom of the Veſſels. You may give this Spirit in the ſame, and alſo in a larger doſe then the former, in convenient liquors.

CHAP. XVIII.

Of Aqua-Fortis's, *and* Regal Waters.

THere is a greater difference to be ſeen in the choice, and in the doſes of the ſubſtances, which are made uſe of for the compoſition of *Aqua Fortis's*, then in the manner of preparing them, which is almoſt the ſame. For though they be generally compounded of nothing but Salt-Peter and Vitriol, and that Niter be the foundation of them all, their quantities nevertheleſs are not alike in all Authors; beſides that they mingle ſometimes Allum, ſometimes Verdigreeſe, ſometimes Antimony, Arſenick, Sublimate, and Sal-Ammoniack, Sea-ſalt, Sal-Gemmæ, *&c.* without Vitriol or with Vitriol. Some alſo only dry and beat the Niter and Vitriol in a Mortar; others make uſe of the latter without calcining it to whiteneſs. Some alſo put two parts of Vitriol to one of Niter. Others put equal parts both of the one and the other. Some there are alſo that put the whole weight, or the half of their weights, in Bole or Brick beaten ſmall; ſo that every Artiſt follows his own method. Which ſhall not hinder me from ſetting down here the moſt common preparation of *Aqua-Fortis*, that ſeems to me to be the beſt for corroſion and diſſolution of the moſt part of Mettals, and ſome Minerals that reſemble them in their Nature.

Having calcin'd to whiteneſs, and powder'd two pound and a half of common Vitriol, and dry'd and beaten in a Mortar the like quantity of good Salt-Peter, mingle them together, and put them into a large Cornute of Potters-Earth, cover'd over with lute; and having plac'd it in a cloſe Reverberatory, and fitted and carefully luted a large Recipient to its neck, begin your diſtillation with a very ſoft fire, then increaſe it from degree to degree to the utmoſt violence of heat; and ſo continue it till you perceive the brown red-colour of the vapours in the Recipient to abate: and the heat of the ſame Recipient to ſlack'n. At which time having ſtopp'd the Regiſter of the Duomo, and the doors of the Cinder and Hearth-place, leave the Veſſels to cool; then having unluted the Recipient, and taken out the *Aqua-Fortis*, put it up in a double glaſs-Bottle perfectly well ſtopp'd.

The malignity which Niter and Vitriol contract, when they are united, and diſtill'd together, is the reaſon that the *Aqua-Fortis* drawn from thence, is much more dange-

dangerous, then the Spirits drawn ſeparately from Niter and Vitriol. And therefore this water is never giv'n inwardly; the principal uſes of it being for Immerſive Calcination, and for the ſeparation of Mettals, whence it is call'd the *Canſtick Water*, or *Water of departure*. And though we ſhould do ill to ſay, that all the Corroding Spirits of Vitriol, may aſcend in the uſual time alloted for the Diſtillation of Aqua-Fortis; in regard that Vitriol endures the fire ſome days before it part with its laſt Spirits. Nevertheleſs we muſt believe that thoſe of Niter carry away a good part with them, and as much as is neceſſary to augment their Corroſive quality. While the mixture of Vitriol with Niter ſerves to a double end, in regard that by imparting its Spirits, it keeps the parts of the Niter divided in the Cornute, and hinders Fuſion, which would retain and concenter the Spirits, and break the Retort.

The malignity of Aqua-Fortis prevents the uſe of the Salt which remains in the Cornute after Diſtillation. For though that ſome famous Authors have very much eſteem'd it, under the names of *Duplicate Salt*, or the *Two-fold Miſtery*, the *Two-fold Allheal*, or *Salt of Two*, and have attributed to it very great vertues; yet it is a very hard thing to ſeparate the vomitive and corroding quality that is inherent to the Vitriol. And ſo much the rather, becauſe this Salt ſtill contains the laſt and moſt ſharp Spirits of the Vitriol, and for that the Niter which is mix'd with it, is become now more eager. I think too, that all the pains a man might take to diſſolve, Filter, and Coagulate this Salt ſeveral times, would be in vain, as alſo the addition of Mineral-Cryſtal, which the ſame Authors direct to have done, the more eaſily to obtain from it the effects which they expect; in regard there are many other Salts which may be more to the purpoſe, and with far leſs danger ſatisfy their Intentions. Beſides that according to the opinion of *Swelfer*, the reſidence of the Diſtillation of the Spirit of Vitriol may be ſo calcin'd, that there ſhall not remain behind any Savour of the Vitriol, and that by expoſing it to the Sun or the open Air for ſeveral days, you may ſeparate from it the Salt of the Air, which has fill'd its pores, which having neither ſharp ſavour nor vomitive quality, but an acid Salt pleaſing ſavour, is incomparably better and more proper to be mix'd with the fix'd Salt part of Niter: which you may extract by a Lixivium made of the ſettlement of the diſtillation of its Spirit, or elſe with as much in weight of Salt *Polychreſtes*, or ſome other fix'd Niter.

There is another Aqua-Fortis to be prepar'd with equal parts of Niter, and Alum, diſtill'd together in a Retort, ſetting apart the Flegm that comes forth firſt, and putting up the Aqua-Fortis that follows it in a double bottle well ſtopp'd; as being a diſſolvent very proper for Biſmuth, Mercury, and for all other Minerals, and ſuch other Minerals that ſerve to beautify the face.

But becauſe theſe ordinary Aqua-Fortis's, though ſufficient to diſſolve Silver, and all other imperfect Metals, cannot do the ſame thing to Gold, we have recourſe to the Salts Ammoniack, Gemmæ, and Sea-Salt; by the conjunction whereof, the points of the parts of theſe waters being ſharpn'd, they diſſolve Gold as eaſily as they did before the other Metals. And therefore they are called *Regal* Waters, as having power to diſſolve Gold, which is the King of Metals.

You may Regalize Aqua-Fortis in a ſmall time and very eaſily, putting into a ſmall Matraſs four ounces of good Aqua-Fortis, with an ounce of Sal-Ammoniack, beaten to a fine pouder; or an ounce of Sea-Salt or Sal-Gemmæ, and diſſolving one of theſe Salts in the Aqua-Fortis in a Sand-bath over a fire of Digeſtion.

You may alſo prepare a Regal water by one ſingle diſtillation, proceeding thus. Take a pound of good Salt-Peter, and a pound of Sea-Salt well dry'd, and having beaten them to powder, mingle them and put them together in a large Cornute of Potters-Earth daub'd all over with lute; and having plac'd it in a Furnace of cloſe Reverberation, and fitted a large Recipient to the neck of it, make your Diſtillation with a Gradual fire like as for ordinary Aqua-Fortis's; and you ſhall find in the Recipient a Regal water proper for the diſſolution or Immerſive Calcination of Gold.

There is alſo another Water to be prepar'd, which ſome call the *Philoſophical Water*, or the Water of the *Two Champions*. For which, take two ounces of good Salt-Peter well dry'd, and two ounces of Salt-Armoniack, and having beaten them in a Mortar, and put them together in a large Cornute of Potters-Earth, daub'd over with lute, and plac'd it in a cloſe Furnace of Reverberation, and fitted a large Recipient

cipient to the neck, you may draw forth with a gradual fire a Water which is not inferior to any Regal-water for the diſſolution of Gold. In reference to which preparation, it is good to underſtand, that the largeneſs of the Retort, and that of the Recipient are as neceſſary as the government of the fire, becauſe the Spirits that proceed from theſe four ounces of ſubſtance, riſe with ſo much violence, that being forc'd by the fire, they would burſt the Retort and the Recipient, if they have not room enough to expand their fury.

The Butter of Niter vitriolated, invented by *Peter John Faber*, being applauded by ſeveral Modern Writers, I thought fit to inſert it here. Take equal parts of Niter and raw Tartar, and having beaten and mix'd them together in a great iron-Mortar, heated before, ſet it on fire in a Chimney with a little Coals, leaving the fire and the Niter to act together according to nature; then gather together and put into a Crucible the fix'd Salts of Niter and Tartar, which remain together in the Mortar. Set the Crucible in a proper Furnace in the midſt of a Coal-fire, and leave it there till the Salts are become perfectly white; then adding thereto, and mixing the full weight of Salt of Vitriol diſſolv'd in Rain-water, reduce them over a ſmall fire to a Curdlement, or a kind of Butter, very white, and keep it in a double glaſs Bottle well ſtopp'd. The Author of this Butter highly commends it both inwardly and outwardly, to purge gently melancholy and tartarous humours, being given from one dram to two, in half an ounce of Syrup of Roſes or Violets; as alſo for the cure of the Gout, being apply'd to the part; to diſſolve cold and ſchirrous ſwellings, to diſſipate thoſe that are wateriſh and flegmatick, and to cure all ſorts of Tettars and Scabs.

CHAP. XIX.

Of the Preparation of Allum.

ALlum is a ſalt juice proceeding out of certain Earths, or places that participate of the nature of Lead, and which is compos'd of much flegm, ſome little acid Spirit, and a good quantity of ſharp and corroding Salt, accompanied with ſeveral terreſtreities. Roch-Allum is the moſt eſteem'd and the moſt made uſe of, of all ſorts of Allum, and of which there is the greateſt quantity. It is alſo call'd Ice-Allum, becauſe it reſembles water congeal'd. There are three ſorts of it of which the firſt is found naturally congeal'd in the Earth. But the other two require art; for the one is drawn forth by boiling and coagulating the Mineral-waters, which are impregnated with it; and the other by making Lyes of Earths and ſtones, wherewith it is mix'd Allum, whoſe colour inclines to red, and is call'd Roman, is accounted the beſt of all that we meet with in *France*. But neither the Roman nor the reſt abound ever awhit the more in remedies. For of all Salts, Allum is that whereof the leaſt preparations are made.

Diſſolve Allum in Rain-water, and having filter'd the diſſolution, evaporate it till it be cover'd with a film, then leaving it to dry, ſeparate and filter the Cryſtals of the Allum; which ſome diſſolve, filter, and cryſtallize ſeveral times, as well to make them more pure, as the better to qualifie their ſharpneſs. This purification is very advantageous, when you would employ *Allum* for Gargariſms, or in other inward remedies. But it is never done for outward applications.

Allum is ſometimes calcin'd in a Crucible, or in an Earthen-Pot fit to reſiſt the fire, where it becomes white, ſpungy, and light; at what time, having no need of its *Spirit* or flegm, you only look after the ſharp and corroding *Salt*, which is the ſame that is commonly call'd Burnt-*Allum*. But they that will have all the good parts of *Allum*, muſt diſtil it in a Retort, after the following manner.

Put two or three pound of Roman Allum into a Retort, encompaſs'd with lute, and having plac'd it in a cloſe Reverberatory, and fitted to its neck a large Recipient, but not luted, begin your diſtillation with a very ſoft fire, increaſing it ſometimes after to the ſecond degree, and ſo keeping it till all the flegm be diſtill'd off, and that you perceive the Spirit of Allum enter into the Recipient in white va-

pours. At which time having empty'd and put apart the flegm, and luted the neck of the Recipient to the beak of the Cornute, continue the diſtillation, augmenting the fire from degree to degree to the utmoſt violence, and continuing it ſo till no more vapours come forth into the Cornute. After which, having ſtopp'd up the Regiſter of the Duomo, and the doors of the Furnace, unluted and given the Veſſels time to cool, you ſhall find in the Recipient the acid Spirit of *A*llum, and in the Retort the *A*llum calcin'd, in a white lump, ſpungy, light, and like to that which is calcin'd in the Crucible; and by this means you preſerve all the good parts of the *A*llum.

The Spirit of *A*llum is very much recommended againſt difficulties of Urine; to unſtop and clear the paſſages of Gravel, the Stone, and other matters which ſtop the courſe of it. It is very proper to open obſtructions of the Liver, the Spleen, and the whole Region of the Bowels; as alſo to quench the thirſt of Fevers, mixing it in proper liquors, from five or ſix to twelve or fifteen drops. It is alſo to be mix'd in Gargariſms, to extinguiſh inflammations that happen in the inner parts of the mouth and throat; to ſtop the courſe, and take away the ſharpneſs of thin and tart humours, that fall upon thoſe parts; and to heal the little Ulcers of the Gums, the tongue, and all the neighbouring parts, only by touching them. The flegm is us'd to cleanſe and cicatrize Ulcers; and the ſediment of the diſtillation to eat away proud fleſh, and excreſcencies that are common to Wounds and Ulcers, and to prevent their putrefaction. You may alſo dulcifie the Spirit of *A*llum, like thoſe of Salt and Niter, mingling with it the ſame meaſure of good Spirit of Wine; diſtilling them together, cohobating them, and proceeding in all things as for the dulcification of the Spirits before mentioned. The Spirit of *A*llum dulcify'd is yet more proper to give for the inſide of the mouth, then that which is not; and you may alſo double the doſe.

Some perſons having diſſolv'd Roch-*A*llum in water, and having filter'd the liquor, diſtill it in a Cinder-bath, till it be dry, in a low glaſs Cucurbit, cover'd with its head well luted. Then leaving the Veſſels to cool, they diſſolve in the diſtll'd water the *A*llum that remain'd in the Cucurbit, filtring and diſtilling anew in the ſame Bath the liquor diſtill'd to dryneſs; then they reiterate the diſſolutions, filtrations, and diſtillations, till all the terreſtreities of the *A*llum remaining in the filter, all the pure ſubſtance be aſcended up in diſtillation. They call this water the Magiſterial Spirit of *A*llum, and they account it one of the beſt Stipticks that can be prepar'd. We may believe, that the uſe of this Spirit Magiſterial may prove of great advantage, by mixing a tenth part in Gargariſms, or in other liquors or decoctions, which are cooling, aſtringent, and deterſive, as well for the diſeaſes of the mouth, as for the other exterior parts, which have need of cooling, cleanſing, and cloſing; as alſo in vulnerary potions, putting in a half part leſs, according to the proportion of the liquors. So that having this water in a readineſs, as at the ſame time the diſtill'd waters, decoctions, and juices of the parts of Plants that are proper, you may prepare at any time thoſe remedies, which will be incomparably much better then all the Alluminous waters diſtill'd, which we find in Books.

Some having put the quantity of calcin'd *A*llum into a glaſs Cucurbit plac'd in a Sand-bath, and having pour'd upon it as much good Vinegar as is requiſite to diſſolve it, filter this diſſolution, and having evaporated it in the ſame Bath, till the film cover it, and leave the Bath to cool; after which they ſeparate, dry, and put up the Cryſtals, which they find in the Cucurbit. Which is to be giv'n upon occaſion in ſome proper purging liquor, from twelve or fifteen to eighteen or twenty grains, twice a week, a little before the fit, for the cure of Tertian *A*gues. But I cannot promiſe the ſucceſs of a thing doubtful, whereof I have not had the experience.

CHAP.

CHAP. XX.

Of the Preparation of Salt-Ammoniack.

THE name of *Ammoniack*, giv'n to this *S*alt, has carry'd it at all times from above thirty other names which Authors have giv'n it, the repetition whereof is not neceſſary. The Temple of *Jupiter* Ἄμμων, ſituated in the midſt of the Deſerts of *Lybia*, gave it its name; becauſe this Salt was formerly found ſublimated upon the ſuperficies of the burnt *S*ands of that Country.

The Urine of Camels that generally travell'd that way in Caravans, in the pilgrimages that were continually made to this Temple, was the firſt and principal matter, and the acid Salt of the air, which impregnated this Salt in the night time, by its union ſtopp'd the volatile parts, which the heat of the Sun had otherwiſe diſſipated. But becauſe we have not at this day the ancient Salt of the Ancients, we muſt of neceſſity content our ſelves with that which is prepar'd at *Venice*, *Antwerp*, and in other places, with five parts of ſound Mans Urine, one part of Sea-ſalt, and a half part of Chimney-ſoot, which they boil together, and reduce into one Maſs, and afterwards ſublime in the form as we now ſee, under the name of that of the Ancients. The impurity of the ſoot, and the great vent for Salt-Ammoniack, are the reaſon that it is uſually cover'd with dirt, and that to have it in its beauty and purity, you muſt be forc'd to diſſolve it in water, filter it and coagulate it afterwards into a maſs, or into Cryſtals.

*S*alt-*A*mmoniack is calcin'd, being mix'd with equal parts of Quicklime, in a Crucible plac'd upon the iron-ſquare in the midſt of a Wind-Furnace, where it is at length forc'd into Fuſion, then it is diſſolv'd in water, and having filter'd and coagulated the diſſolution, it is left to diſſolve by little and little in a Cellar, in a liquor fit to diſſolve Gold or Silver.

You may ſublimate Salt-*A*mmoniack in a Sand-bath with a gradual fire, having mix'd it with equal parts of Sea-ſalt. You may alſo very properly ſublimate it by the ſame fire, having incorporated it with its weight of Steel-filings, or elſe with equal parts of thoſe little ſcales of Iron, which are to be gather'd up under Smiths *A*nvils, and force the flowers of it to aſcend, which are highly commended in Quartan *A*gues, giving them at the beginning of the fit, from five or ſix grains to a ſcruple, in Wine or in ſome other liquor, having us'd purgative or emetick remedies before.

You may alſo ſublimate the flowers of Salt-*A*mmoniack, mixing them with equal parts of Salt-Tartar, or Blood-ſtone. But becauſe the Salt *A*mmoniack principally contains in its compoſition much of volatile urinous Salt, and one part of Sea-Salt, part acid, part fix'd, and that you may by raiſing theſe flowers ſave two different Spirits, the one urinous, and the other acid, which the ſame Salt encloſes in its ſubſtance, I refer the preparation thereof to the next Chapter.

CHAP. XXI.

Of the Diſtillation of the Urinous *Spirit of* Salt-Ammoniack.

THE volatile Salt of the Urine, added to that of the Soote, predominating in quantity over that of the Sea-Salt, in the Compoſition of Salt-Ammoniack, and the latter not being able to render the other capable of reſiſting the fire, though it have the power for ſome time to conceal its Urinous odor, and to make it appear fix'd while you do not expoſe it to the violence of the fire, we are conſtrain'd to reinforce the Sea-Salt with ſome other fix'd Salt, when we would diſtil it, or cauſe the volatile part alone to aſcend in Flowers, otherwiſe the volatile Salt in ſublimating it ſelf would raiſe with it all the Sea-Salt, and would cauſe it to participate of its volatile nature: Therefore to make the volatile part of the Urine to aſcend either in Spirit, or in Flowers, and to ſtop at the bottom of the Veſſel the fix'd and Acid parts of the Sea-Salt, you muſt obſerve this Method.

Take a pound of Salt-Ammoniack, and one pound of Salt of Tartar, or if you pleaſe, four pound of good Aſhes of Oak'n wood that never floated in the water, and having beaten them in a Morter, and put them into a Cucurbit ſomewhat large, and plac'd the Cucurbit in a Sand-bath, ſprinkle the mixture with half a pint of water; then having carefully cover'd the Cucurbit with its head, and luted the cloſures diligently with Paper and Amydon, or with a wet bladder; and having fitted and luted a ſmall Recipient to the beak of the head, kindle under the Bath a moderate Coal-fire, and continue it five or ſix hours; or till all the volatile Spirit of the *Salt*-Ammoniack be diſtill'd into the Recipient, and that all the Flowers be ſublimated part, in the head, and part upon the ſides of the Cucurbit, above the ſubſtances. After which, leaving the Veſſels to cool, you ſhall find a volatile *Spirit* in the Recipient, very ſubtle, the penetration whereof neither the eyes nor noſe will endure, which you muſt put up in a double Glaſs-bottle, perfectly well ſtopp'd, putting up at the ſame time the Flowers in the head, and thoſe in the Cucurbit, into a double glaſs bottle as well cloſ'd. I would have you cover the Cucurbit ſpeedily with its head, as ſoon as you have ſprinkl'd the ſubſtances with water, becauſe that the great inclination that the *Salt* of Tartar, and the acid of the *Sea-Salt* have to unite together, cauſes them immediately to act reciprocally one upon another, eſpecially when you put the water in, which diſſolving the *Salts*, cauſes them to act and react with more ſpeed, then they could do before they are diſſolv'd. Which is the reaſon that the volatile *Salt* of Urine, which makes up the compoſition of *Salt*-Ammoniack, finding it ſelf diſingag'd from the bonds of the *Sea-Salt*, riſes, and diſcovers it ſelf by its penetrating odor, aſcending partly in the form of a *Spirit*, which is indeed no more then the volatile *Salt* diſſolv'd in the water with which the *Salts* were ſprinkl'd; and partly in Flowers, forc'd out by the fire, and made to riſe into the head, or to ſtick to the upper ſides of the Cucurbit.

The volatile *Spirit* of *Salt* Ammoniack given from half a ſcruple to half a dram, and ſometimes to a dram in proper Liquors, is a powerful ſudorifick. For which reaſon it is adminſter'd with good ſucceſs in the cure of malignant Fevers; and all Maladies that require the provoking of *Sweat*; as alſo in Venereal Diſtempers, eſpecially where Mercury has been given out of ſeaſon, or in two great quantity. For this *Spirit* drives and forces out through the Pores of *Skin*, the Mercury that was ſtopp'd in the ſolid parts of the body. It gives quick and ſenſible relief in Apoplexies, Epilepſies, Lethargies, and in the moſt part of other diſtempers of the head; as well taken inwardly as held to the Noſtrils. For it opens, penetrates, cuts and ſubtilizes thick and viſcous matters, and diſſolves and diſſipates all ſorts of Vapours that riſe from the lower parts, and which filling the ventricles of the Brain, cauſe Vertigoes and other troubleſome accidents which interrupt the neceſſary courſe of the Spirits, and the functions of all the parts. For which reaſon it is very proper in ſwooning fits, weakneſs and Palpitations of the heart, and particularly to

ſuppreſs

ſuppreſs and diſſipate vapours that riſe from the Matrix. It powerfully reſiſts putrefaction, kills worms, opens the obſtructions of all the inteſtines, and above all the paſſages of the Urine, provided you mix it with ſome fix'd Salts or Acids, which may rehiculate its operation to the parts. It is alſo of great advantage in Scorbutick diſtempers, becauſe of the vertues which it has to purify the maſs of the blood and to facilitate its circulation. It may be mix'd with divers diſtill'd waters as well ſimple as compound; with Tinctures, Syrups, Extracts, Confections, and other preparations as well Galenical as Chymical; the doſe being from a ſcruple to two, in ſeven or eight ounces of Liquor, and mixing the whole, taking it by intervals between meals, one or two ſpoonfuls at a time, and continuing the uſe of it in long diſeaſes or ſuch as are ſubject to return.

The volatile Spirit of Salt-Ammoniack being nothing elſe but the moſt volatile part or Flowers of the ſame Salt, diſſolv'd in ſome portion of Flegm, we muſt attribute the ſame vertues to the Flowers, provided you keep them in ſome double Glaſs bottle well ſtopp'd. Their doſe muſt be ſomething leſs, becauſe they want that moiſture which accompanies the volatile Spirit.

As ſome are of opinion, you may mix with the Salt-Ammoniack three times as much Quick-lime in pouder. But you muſt not have any more, for if you would afterwards draw forth the acid Spirit of the Sea-Salt, it could not be done. For the fix'd Salt, and Acid and Terreſtrial part of the Quick-lime, predominating over the acid of the Sea-Salt, would hinder the ſame Salt from yeilding it's acid Spirits, which the Salt of Tartar does not hinder at all. We cannot alſo but believe, that the Quick-lime mix'd among the Salt-Ammoniack, when you intend to draw forth the volatile Spirit or the Flowers, breaks the force of the Sea-Salt Marin, which makes up a part of the Compoſition of the *Salt*-Ammoniack; whereas on the other ſide, the fix'd Salts fortify it, and preſerve to it both its nature and its qualities; conſidering that the *Salt* Marine, though for a time capable to ſtop the volatile part of the Salt-Ammoniack, as well when it is in preparation, as after it is prepar'd, provided you leave it in its own condition, cannot however detain it, nor ſubſiſt it ſelf when they are both expos'd together to the violence of the fire. For then the volatile part of the Salt-Ammoniack does violence to the acid, and carries it up with it, ſo far is the acid from ſtopping that, or it ſelf either. I ſay it is not then able to reſiſt the force of the volatile forc'd by the fire, at leaſt if it be not reinforc'd by ſome fix'd Salt, which predominating in quantity over the volatile part of the Salt-Ammoniack, which ſurmounted the Salt Marine, may give a Counterpoiſe to the latter, and prevent the volatile from riſing in ſublimation, or in diſtillation. For we muſt believe, that in the great inclination which the acid part of the *Salt* Marine has to unite it ſelf to the fix'd Salts rather then to the volatiles, the fix'd Salts uniting themſelves with it, ſtop it and preſerve it intire, and prevent the volatile part of the *Salt*-Ammoniack from riſing, as it would do, if its parts were not ſtrongly engag'd in their Pores. For if the fix'd *Salts* which you may here add, did break the force of the *Salt* Marine, it would not be in a condition after that to afford its acid *Sprit* as it does, when having been united with the *Salt* of Tartar, it has been diſingag'd from the volatile *Salt*. And if it were powerful enough without the help of this fix'd Salt, it would not ſuffer it ſelf to be rais'd by the volatile part, as does befal it being alone, as will be found to be true upon tryal.

And though that the mixture of one fix'd Salt with *Salt*-Ammoniack ſtops and fortifies the acid and fix'd parts of the *Salt*-Marine, letting the Urinous volatile part eſcape, and diſpoſing it to riſe in Spirit or in Flowers, their manner of action is however very ſlow and very feeble, unleſs you pour ſome Liquor upon theſe *Salts* after you have mix'd them, and that this liquor diſſolving in part the acid of the Sea-Salt, and the new fix'd Salt, they obtain the means to exerciſe their action reciprocally one upon another, and to make together one particular body; while the volatile Urinous Salt reſumes its firſt nature, and that tde acid and fix'd *Salt* ſtopping themſelves at the bottom, and not depriving the firſt of its natural liberty, it raiſes and diſcovers it ſelf to the noſe and eyes of them that are near it.

But though the addition of the water be very advantageous for the diſtillation of the urinous *Spirit*, and for the ſublimation of the Flowers of *Salt*-Ammoniack, becauſe that in diſſolving the *Salts*, it facilitates the conjunction of the acid of the Salt Marine to the fix'd Salts, and that it gives way to a greater ſeparation of the volatile *Salt* parts from the fix'd; we muſt not however conclude from thence, that we cannot cauſe a volatile Urinous Spirit to aſcend from theſe Salts mix'd together without

without the addition of any moiſture, or that we cannot cauſe a good quantity of the Flowers to ſublime, provided you leave empty about three fourths of the Cucurbit, that you carefully lute the veſſels, and that you govern your fire ſo, that you do not haſten too much the diſtillation of the Spirit, nor the ſublimation of the Flowers. For theſe Salts having uſually receiv'd from the air ſome certain moiſture ſufficient to diſſolve and unite ſome part of the acid to the fix'd Salt, the ſame moiſture finding it ſelf afterwards forc'd by the fire, and conſtrain'd to riſe in vapours, diſſolves alſo, and carries with it ſome part of the Urinous volatile Salt, by forſaking the fix'd, whence it comes to paſs that afterwards it diſtils in Liquor into the Recipient. While notwithſtanding the defect of moiſture, the union of moſt part of the acid with the fix'd Salt, hinders it not from ſo doing by little and little, though much more ſlowly and with leſs perfection, and that it give way to the ſeparation and ſublimation of the Flowers of a good part of the volatile Salt.

CHAP. XXII.

Of the Diſtillation of the Acid Spirit of Salt-Ammoniack.

THE acid Spirit of the Salt-Ammoniack proceeding only from the acid of the Sea-Salt, and the quantity of the latter being much leſs in the compoſition of the ſame *Salt*-Ammoniack, then that of the volatile Urinous, we cannot ſeparate this *Spirit* from the other ſubſtances, while the volatile Salt is mix'd with it. And therefore you muſt begin to diſtil that firſt, and not undertake that of the acid Spirit till the volatile has made way.

Take the maſs which remains in the Cucurbit after the Diſtillation of the volatile *Spirit*, and having reduc'd it to pouder, and mix'd it with four times as much of common Bole, powder'd in the ſame manner, put them into a Cornute, and having plac'd it in a cloſe Reverberatory, and fitted and luted a large Recipient to the neck, draw forth the acid *Spirit* with a gradual fire: but you may take another courſe, and thereby preparing a good Urinous *Spirit* of *Salt*, and ſaving all the good parrs of the ſubſtances mix'd together, gain at length an acid *Spirit*.

To which purpoſe having pouder'd two pound of *Salt*-Ammoniack, and as much Blood-ſtone, and having mix'd them, and put them together, into a large Glaſs Cucurbit, place it in a Sand-bath; and cover'd it with its head, fitted a recipient to the head, and perfectly well luted all the cloſures of the Veſſels, kindle under the Bath a very ſoft fire at once; which you muſt encreaſe a little and a little by degrees, and at length to the utmoſt violence, continuing it ſo for five or ſix hours. Then leaving the Veſſels to cool you ſhall find in the Recipient, the odor whereof will be very penetrating, which is to be put up in a double glaſs bottle perfectly well luted: and in the head and upon the ſides of the Cucurbit above the ſubſtances you ſhall find the Flowers of Salt-Ammoniack of a yellow colour, which you may keep as they are, if you pleaſe in a double glaſs-bottle well ſtopp'd. But you may make a better advantage of them, if after you have pouder'd them very finely, and put them into a Matraſs, you extract the tincture with good Spirit of Wine by the moſt gentle ordinary ways: and if after you have filter'd all the Tinctures, you draw forth the *Spirit* in *Balneo Mariæ* to the dryneſs of the Salt, which will be much more beautiful then the Flowers, and will have the colour and Aromatick odor of Saffron. You may alſo keep it in that condition, or diſſolve it into a Cellar in a Golden Liquor, which may be giv'n from five or ſix drops, to ten or twelve, in proper Liquors, againſt all manner of obſtructions, particular thoſe of the Hypochondria.

But for as much as the acid part of the *Salt*-Ammoniack remains at the bottom of the Cucurbit, among the ſettlement of the Blood-ſtone. After you have pouder'd and mix'd the whole with four times as much Potters-Earth dry'd and pouder'd in the ſame manner put the whole into a large Retort of Earth, encompaſs'd with

with lute, and having plac'd it in a close Furnace of Reverberation, make your distillation with a Gradual fire, proceeding in all things as for the distillation of the same Spirits: and you shall have an acid yellow Spirit, much more pleasing and much more proper for all uses, then that which is drawn from the *Salt*-Marine. You may also prepare a Urinous Spirit, Flowers, and an acid Spirit of Salt-Ammoniack impregnated with the impressions of the acid, proceeding as follows.

Having powder'd and mix'd two pound of Salt-Ammoniack, and as much filings of Steel, put them together into a large Cucurbit, plac'd in a Sand-bath, and having cover'd it with its head, fitted a Recipient to the pipe of the head, and carefully luted all the closures, kindle and keep for some time a very soft fire under the Bath; but increase it by little and little, and by degrees to its utmost violence, and having proceeded in all things as for the distillation and sublimation of this Salt with the Blood-stone, put up apart the Urinous Spirit in a glass-Bottle perfectly well stop'd; then having scrap'd together the Flowers in the head and from the sides of the Cucurbit, of a brown colour; bruise and mix the remainder with the Flowers, and put all together into a convenient vessel; expose it night and day in the air for some weeks, and you shall perceive by little and little a kind of a Flower to rise above the substances, and how that by moistning themselves, swelling and raising themselves, they will become soft, and of an ashy colour enclining to yellow, having then a sharp eager vitriolic'd savor, near to that of Mars or Iron a little *Sweetish*. At which time having put the whole into a Retort of Potters-Earth, daub'd over with Lute with a long neck, place it in a close Furnace of Reverberation, and having fitted to it a large Recipient, and carefully luted all the Closures, make your Distillation over an open fire, soft at the beginning, but augmented by degrees to the utmost heat it can give, and continue it in the same manner as for the last Distillation of the Blood-stone. By this means you shall have an acid Spirit, of a Gold'n colour, which may be rectifi'd over a soft fire, to separate the watry part, with which it is more impregnated then the preceding Spirit, because of the moisture of the air which is mix'd therewith.

This *Spirit* is highly recommended to open all obstructions of the lower Belly, to break and expel the Stone, to asswage the pains of the Intestines; strength'ning them, as well as the stomach, the Liver, and the Spleen. The dose is from five or six to ten or twelve drops in proper Liquors.

You may instead of mixing the Flowers with the Mass that remains after distillation, mingle them with half their weight in new Salt-Ammoniack, and having put the whole over a Sand-Bath in a Cucurbit of glass cover'd with its head, carefully luted and fitted a Recipient to it luted in the same manner, sublimate them in yellow Flowers, and draw forth by the same means a small quantity of Spirit, participating of Acid and Urinous, and employ them for the same uses, as the Spirits before mention'd.

The different qualities of the Urinous Spirit, and the acid Spirit drawn from Salt-Ammoniack, may surprise those who seeing this *Salt*, should not know its Composition, nor the nature of the Salts which compose it. Many also may wonder to see these two Spirits converted into one Salt compos'd of both, and that clear Liquors, such as these Spirits are, should take the body, shape and savor of Salt, without the addition of any strange matter which may be active or assisting in this Corporification. The tryal however which may be made of these things, will easily stop the mouths of those who doubt of it; especially when they shall have seen, that by putting into a Cucurbit the acid Spirit of Salt-Ammoniack, and by pouring upon it by degrees, and at several Repetitions the Urinous *Spirit* of the same *Salt*; or else by putting in the same vessel the Urinous Spirit, and pouring upon it the same acid Spirit, till Ebullition cease, the two Spirits united together, as having reciprocally penetrated each other, shall be found not only to have lost their savour and odour which they had particularly by themselves before their conjunction, but if you keep the Cucurbit which contains them, for some time upon a Bath of Ashes or Sand, over a moderate heat, you shall see that the insipid flegm which was mingl'd among them, dissipating it self, they will assume the body, shape, and all the qualities of Salt, without destroying each other, and that they will be in a condition also both of them their particular substance of a *Spirit*, when the Artist has a mind to separate them by the means of some fix'd *Salt*.

CHAP.

CHAP. XXIII.

Of the Preparation of Vitriol.

VItriol has been always rank'd among the Salts, though ſome have thought it very different from their nature, and have taken it for a Salt altogether particular, compos'd of an acid Spirit, very much reſembling that of Sulphur; and of ſome particles of Iron or Copper, or ſome other Metal or Metallick matter, in part terreſtrial, which the ſame Spirit has met withal, and diſſolv'd in the Bowels of the Earth, and with which it is incorporated in form of a Salt. The variety of the colour and ſubſtance of Vitriols, and the parts which compoſe them, has much contributed to this opinion; becauſe that though we find ſome Vitriols, and particularly the white, which contain no apparent Metal or Metallick matter, the moſt part however of the reſt have in them particles of Iron or Copper, and ſometimes both together. Whence it falls out, that when there is no intention but to open the paſſages by fortifying the parts, thoſe Vitriols are made choice of that have no Iron; but principally thoſe which contain much Copper, when their Emetick vertue is requir'd, accommodating them to the effects which you deſire, with regard to the ſubſtances which compoſe them.

All the Vitriols have been much us'd both in the one and the other Pharmacy. Some Authors alſo who have aſpir'd to a univerſal remedy, have thought that it was conceal'd in Vitriol, and that the word *Vitriolum*, containing in it ſomething of Myſterious, every one of the Letters ſignifying a word, which they thus expounded, *Viſitando Interiora Terræ, Rectificando Invenies Occultum Lapidem, Veram Medecinam; by ſearching the Bowels of the Earth, by rectification thou ſhalt find the Occult Stone, which is the true Phyſick.* But all theſe imaginations, nor all they can ſay of it, not being able to change the nature of the Vitriol, and the colour and place where it is bred, cauſing for the moſt part the differences, and demonſtrating the various compoſition, and different qualities; I ſhall only ſay, that the blew colour, as well in Salts as waters, being an eſſential mark of the mixture of Copper among the other ſubſtances, we are not to doubt but that the blew Vitriol, being that of Cyprus, is that of all the reſt which participates moſt of that Metal; that the green colour, being compos'd of blew and yellow, and the deepeſt green being moſt charg'd with blew, the greeneſt Vitriol participates more of Copper then that which is leſs green; whoſe pale colour enclining to yellow or earthy, denotes nothing elſe but the earthy or ferruginous matter which is incorporated with it. It may be alſo ſaid, that the white Vitriol is that which is leſs mix'd with Metallick ſubſtances. As for the red colour, which is natural to certain Vitriols, which the Philoſophers have deſcrib'd under the names of *Sori*, *Chalcitis*, and *Miſi*, it is only to be attributed to the ſubterraneal heat, which has given them that colour, which the ordinary fire gives to Vitriols that are expos'd to it.

Vitriol is variouſly prepar'd according to the various intentions of the Artiſt. The purifying of it is the moſt common of all its preparations; though it be not always neceſſary, but to ſeparate the terreſtreities, and to have the Cryſtals tranſparent, or to mix with other internal preparations. To which purpoſe it is enough ſometimes to diſſolve the Vitriol in common water, to filter and cryſtallize it, as is done to all other Salts. But when you would perfectly purifie it, and ſeparate very much of the terreſtrial parts, as alſo of the Metallick particles which are inwardly and deeply mix'd with it, and which may be apt to paſs through the filter, we are obliged to have recourſe to long digeſtions, by means whereof the terreſtreities and Metallick parts precipitate to the bottom of the liquor, whereby the Cryſtals afterwards are much fairer in colour, and more tranſparent then the Vitriol before it was purify'd. Some to ſave expence of time, pour upon the diſſolution of Vitriol ſome new acid, among the reſt the liquor of Niter or Vinegar diſtill'd; which uniting it ſelf with the fix'd Salt-part of the Vitriol, cauſe it to abandon the terreſtrial or Metallick parts, which it has diſſolv'd, whence follows their precipitation to the bottom of the liquor. But theſe means are not to be us'd but upon certain occaſions, where the mixture of theſe new acids is not contrary

to

to the effects, which you expect from the Vitriol or its parts; or where their mixture may be necessary, as you may observe by the following water.

CHAP. XXIII.

The Stiptick water *of* Monsieur Matte La Faveur *Distiller in* Montpelier.

DIssolve twenty five pound of Vitriol in a sufficient quantity of Common water, and having strain'd this Dissolution through a course Linnen-Cloath, put it over the fire in a Copper Caldron, where after it has boil'd some few bublings take off the Vessel from the fire, and pour immediately upon the Liquor, a pint of Spirit of Vinegar, to cause the Terrestrial part of the Vitriol, improperly call'd Sulphur, to precipitate to the bottom of the vessel; then leaving the Liquor for ten or twelve hours to settle, and to give the Earth time to sink to one place, pour out by inclination the Liquor that swims at the top: and having well wash'd, dulcify'd, and dry'd the pouder resting at the bottom, over hot Embers, put eight ounces of it into a glass Cornute, and having pour'd upon it eight ounces of Spirit of Vitriol well purify'd from its Flegm, make your Distillation with a gradual fire, soft at the beginning, and at length very violent, continuing it so till nothing come out of the Cornute. Then give the Vessels time to cool, break the Retort, beat the Mass that remains to pouder, and put it into a Matrass, upon which having pour'd Spirit of Wine rectify'd with Salt of Tartar, about five or six fingers breadth above the substances, cover the Matrass with a *Vessel of Rencounter* carefully luted, and set it upon a Bath of digestion for four and twenty hours. After which the Spirit of wine being become very red, filter it hot through a course Paper, then drawing it off again through a glass-Alembick, or gently evaporating it to the driness of the sediment, you shall find at the bottom a whitish pouder, upon an ounce whereof having pour'd four ounces of Rain-water, leave the mixture in the Sun for some days, then Filter the Liquor, which will be a Stiptick water proper to stop all sorts of bleedings.

I have inserted this water among the preparations of Vitriol by the order of *Monsieur D'Aquin*, chief Physitian to his Majesty, who having discover'd the Author, who prepar'd it in his presence, for which the Doctor has testify'd his acknowledgment by obtaining several favours of the King in his behalf. The said *Monsieur Faveur*, has prepar'd another Stiptick water which has the same vertue with the preceeding, though somewhat different from it, proceeding after the following Method.

Boil seven or eight pound of Vitriol of *Piza*, in sixteen pints of water, and when the Vitriol is dissoly'd, take it off the fire and pour upon it half a pint of Spirit of Vinegar; let the matters settle, and pour out the Liquor by inclination; wash, dulcify, and dry the pouder which was precipitated to the bottom. Then having put it into a Retort luted only in the under-part, and pour'd upon it double its weight in Spirit of Vitriol well rectify'd, make the Distillation over a naked fire, but moderate, till the substances be dry, which will be then of a Greyish colour. Then break the Retort, pouder the Mass and put it into a Crucible over burning Coals, stirring it continually with an Iron-Spatula, till it turn yellowish. At which time having pour'd it into a Mortar and well beaten it, put two ounces into a Matrass, with three ounces of ordinary water, and after a digestion of half an hour, filter the Liquor through a coarse paper, and keep it in a double glass bottle well stopp'd as a remedy against all Hæmorraghia's or violent fluxes of blood.

CHAP. XXIV.

Of Precipitates, Earths, *or* Sulphurs *of* Vitriol.

THE purifying of Vitriol by the means of long and reiterated digeſtions, made in common water, and the preparation of Stiptick water, already deſcrib'd, are examples of the precipitation of moſt of the terreſtrial parts of the Vitriol. But we may by other means make a precipitation, and a much more abſolute ſeparation of the ſolid parts which the acid Spirit of Vitriol had diſſolv'd, which ſome call ſimply Earth, others Metallick Earth, or Sulphur of Vitriol.

Some having made choice of a green and cryſtalline Vitriol, diſſolve it in hot Rain-water, and having filter'd the whole, they pour upon it by little and little the liquor of Tartar, or the Lye of Wine-Lee's Aſhes, till ebullition ceaſe, to the end the acid of the Vitriol, and the fix'd Salt of the Tartar, or of the Wine-Lees, acting reciprocally the one upon the other, and uniting together, the firſt may be compell'd to forſake the matter which they have diſſolv'd, and to permit it to precipitate to the bottom in form of an Earth, which is to be waſh'd in ſeveral waters and dry'd, after you have pour'd out the liquor that ſwims uppermoſt by inclination, and put it up apart by it ſelf.

This Earth is call'd *Sweet Sulphur of Vitriol*, though very improperly, ſince that in reality it is only a Metallick Earth, principally recommended to cure diſeaſes of the Lungs, and to cleanſe and cicatrize Wounds and Ulcers, as alſo to kill Worms.

Neither is the liquor that ſwims above the precipitated Earth pour'd out by inclination, as if it were good for little, ſince it contains in it the moſt pure acid and ſalt part of the Vitriol, united with the fix'd ſalt part of the Tartar, or of the aſhes of Wine-Lees; and a very good medicine may be made of this liquor after precipitation of the Earth of Vitriol with the liquor of Tartar. For by this means the terreſtrial part naturally conceal'd in the Salt of Tartar, precipitates with that of the Vitriol; ſo that by the conjunction of the acid part of the Vitriol with the fix'd Salt of the Tartar, and by the evaporation of the water made uſe of, you ſhall find at the bottom of the Veſſel, a pure and cryſtalline Salt, compos'd of two Salts, the effects whereof are different from the ordinary ſorts of Vitriol, which are Emetick, whereas this works generally by ſtool, and rarely provokes vomiting; the doſe being from half a dram to a whole dram; beſides that it is recommended againſt intermitting Fevers, eſpecially when there is an occaſion to purge melancholy.

You may very properly uſe Vitriol of Mars, inſtead of common Vitriol; and having diſſolv'd it in diſtill'd Rain-water, or in flegm of Vitriol, and digeſted it in a Matraſs for ſome time, filter the liquor. Then precipitate it with the liquor of Tartar; ſeparate, waſh, and dry the precipitated Earth; and having evaporated the moiſture of the Salts, and cryſtalliz'd them together, keep them for your occaſions. For the aſtriction of Mars, or Iron, ſtill better correcting the vomitive quality of the Vitriol, renders this Salt in a condition only to act by ſtool or urine.

Some there are that having put into a Cucurbit one part of the filings of Steel, and two parts of excellent Vitriol, pour upon them diſtill'd Vinegar, two or three fingers above the ſubſtances; then placing the Cucurbit in a Sand-bath, they evaporate the moiſture till the ſubſtances prove dry, and alſo till they look red. Then leaving the Veſſels to cool, powder'd and put the maſs into a new Cucurbit, they pour more diſtill'd Vinegar upon it, four or five fingers above the ſubſtance; which done, having digeſted the whole till the Vinegar look red, they filter this tincture, and precipitate it with the liquor of Tartar, expecting to have by this means a true Sulphur of Tartar.

Others thinking to do better, after they have diſſolv'd Vitriol of Mars, or common Vitriol in Water, they ſprinkle the filings of Steel, and having dry'd it in a Sand-

Sand-bath, and continue this ſprinkling and drying of the Steel-duſt, till it be become very red. Having after that pouder'd the Maſs, they extract a Tincture with diſtill'd Vinegar; they filter, it, and precipitate it with Liquor of Tartar, in expectation of a Sulphur of Vitriol, which they have entitl'd *Anodyne*, and would haveit to be a ſecond *Laudanum*; but no wonder the Effects do not anſwer their promiſes, ſince all this pretended Sulphur, is nothing elſe but a Metallick Earth.

CHAP. XXV.

Of the Diſtillation of Vitriol.

THey that contemplate one part of the ſubſtances which they may extract by the Diſtillation of Vitriol who only look after the firſt and ſecond Spirit, and unwilling to ſpend time, are not diligent to ſeek for all that force and penetration which they might meet with in the Diſtillation, uſe no other but *Engliſh* Vitriol, which participating more of Iron then of Copper, and having leſs fix'd Salt then moſt of the other Vitriols, conſiſts of leſs compacted parts, and affords its Spirit in greater quantity and with leſs trouble. However it is not to be thought, for all that, that the *Engliſh* Vitriol is without ſome particles of Copper, as ſome have written. For if it were, the Mars would ſhew it ſelf by its brown colour which would predominate. Whereas the red colour, which appears very ſuddenly in this Vitriol, as alſo in the reſt, except the white, when they are expos'd to the violence of the fire, is an undenyable ſign of the Copper that lyes conceal'd in it; as alſo the red colour, which happens to the Verdigreeſe being upon the fire, is alſo an aſſur'd mark that it contains in it ſeveral particles of Copper. But though the dearneſs and the abundance of the particles of Copper which the Vitriol of *Cyprus* contains, of which the blew colour is a certain evidence, be the reaſon that it is not ſo much us'd for the extraction of its Spirit; however moſt ſure it is, that *Angelus Sala*, *Schroderus* and ſeveral other Writers, recommend a meaner Vitriol for Diſtillation, and which contains more particles of Copper. And we ſee by experience that the Vitriol of *Germany* in fair green Cryſtals, and by conſequence more full of the mixture of Copper then that of *England*, is that whoſe Spirits are more powerful, and which affords them in greater quantity. Whence it happens that we ſeldom diſtil that of *England*, but when the Aſtriction of the Mars is requir'd, rather then the penetration of the Spirit.

But to obtain all the good parts of the Vitriol: After you have made choice of that which you judg moſt proper for your purpoſe, fill up with it, about the half of a glaſs Cucurbit ſomewhat low, plac'd in *Balneo Mariæ*, and having cover'd it with its head, fitted a Recipient to the pipe, and carefully luted the cloſures, cauſe the Bath to boil without intermiſſion, till nothing more diſtil into the Recipient. Then let the Veſſels cool, and having unluted the Recipient, put up the diſtill'd water in a Bottle cloſe ſtopp'd. Which water Writers call the *Dew of Vitriol*; principally recommending it againſt Diſtempers of the head, and to ſtrength'n the Bowels, as alſo to reſtore and preſerve the Radical moiſture, giving the weight of two Drams, eſpecially in the Spring and after Purgation.

At the ſame time take the Cucurbit out of the *Balneum Mariæ*; and having plac'd it in a Sand-bath, and reluted the cloſures of the Recipient, draw off by a ſtronger heat, then that of a boiling Bath, all the water that will come forth; which will prove clear, of a pleaſing ſcent, and deſerves to be kept apart; as being proper to cleanſe the Reins, open the paſſages of the Urine, and heal internal Corroſions, giving the weight of a dram in meat-Broth. It cools the Inflammations of Wounds, aſſwages the pain, and cicatrizes them being apply'd. It is alſo very good to cure the ſcurſe.

Having ſav'd theſe two Waters and let the Sand-bath cool, beat the Maſs that remains in the Cucurbit to pouder, and having fill'd therewith two thirds of an Earthen Retort, daub'd over with Lute, ſet in a cloſe Furnace of Reverberation; and having fitted and luted a large Recipient to the pipe, begin your diſtillation

with a gradual fire, ſoft at firſt, but increas'd by degrees from time to time, and forc'd at length to the utmoſt violence; continuing it ſo, till no more vapours come forth of the Retort, but that the Recipient appear altogether clear. At which time the Veſſels being cool and the Recipient unluted, pour out the diſtill'd Liquor into a double glaſs Bottle, and having well ſtopp'd it keep this Spirit for your occaſions. Or elſe, pour it forth into a Glaſs Cucurbit, cover'd with its head, and having plac'd it in a *Sand*-bath, fitted a Recipient to the Nozel, and carefully luted all the cloſures, you ſhall draw forth in the firſt place a very ſubtle penetrating Sulphury Spirit, which you muſt keep apart in double glaſs bottles very cloſe ſtopp'd. Then continuing the fire, the Flegm will riſe and diſtil; after that a *Spirit* indifferently Acid, and at the bottom of the Cucurbit you ſhall find the more weighty Spirits, and moſt tart, which they call improperly Oil of Vitriol.

Vitriol yields its Spirits in white Clouds as all other Salts except Niter, whoſe vapours are red; but the compactneſs of its parts are the reaſon why the Spirits come forth ſo ſlowly: for you are forc'd to continue the fire for three or four natural days, and ſometimes alſo longer, eſpecially for the Diſtillation of *German* Vitriol; when you would have the laſt Spirits. And if you will continue the fire till you can ſee croſs the Recipient the mouth of the Retort red, it is a ſign that nothing more comes out of the Retort, and that the vapours are all diſſolv'd into Liquor in the Recipient. But becauſe theſe laſt Spirits are extremly corroſive, and impregnated with Metallick ſubſtances, contain'd in the Vitriol you may ceaſe the Diſtillation, twelve hours after the white vapours begin to appear, or when you perceive certain dusky drops about the neck of the Recipient. Which hinders not, but that having unluted the Recipient, by moiſtning the Lute of the cloſures with hot water, and put up the Spirit ſafe, you may put on again and relute the little Globe, or *Balon*, and continue the Diſtillation with a very violent fire, till the Vitriol has yielded its utmoſt Spirits.

The firſt Spirit of Vitriol, not being ſo Corroſive as the latter, is more proper to take inwardly; it is Diuretick, and ſomewhat Diaphoretick: it cuts, attenuates, and reſiſts the putrefaction of the humours. It ſtirr's up an appetite; it opens the obſtructions of the Liver, Spleen and Meſentery, it qualifies the heat of Fevers mix'd in drink from four or five, to twelve or fifteen drops; or till the Liquor be pleaſingly ſharp: it heals the Ulcers of the tongue, and the inſide of the mouth, being touch'd with it: it is very proper to cure all diſeaſes of the Skin that proceed from Salt Flegm.

The Metallick Earth or Oaker wherewith Vitriol abounds, hindring its Fuſion when the fire has conſum'd its greateſt moiſture; and this conſumption being effected before the Vitriol is put into the Retort, we never mix with it thoſe dry and acid ſubſtances which are uſually mix'd with other Salts to prevent their Fuſion, when we intend to extract their Spirits, but we put it alone thus dry'd into the Cornute. The Earth it ſelf wherewith it abounds, makes it fit to hinder the ſeparation and Fuſion of the Niter, with which we mix it for the preparation of Aqua-Fortis.

Some Authors having put the Vitriol into a Glaſs Cucurbit plac'd in a Cinder-Bath, cover it with its head, and having well luted the Cloſures, and fitted a Recipient to the Pipe, with a moderate heat they draw off the Flegm and acid Spirit, as much as they can force to aſcend from it; then having cohobated the diſtill'd Liquor upon the ſediment, and repeated Diſtillation and Cohobation ſeven or eight times, and redoubl'd the heat in the laſt diſtillation, they at length draw forth a Flegm mix'd with much Acid Spirit, whoſe odor becomes very grateful, if circulated two or three days in a proper Veſſel, very well ſtopp'd, and plac'd in a Sand-bath, over a fire of digeſtion.

This Acid Flegm, as alſo the volatile Spirit of Vitriol, is very much recommended to diſſipate pains in the head, and to cure the Epilepſy. There is no better way to limit the doſe then by ordering it, till the ſharpneſs be pleaſing to the Palate, in thoſe Liquors wherewith it is mix'd. All the Spirits of Vitriol are good to kill Worms, and peculiarly to ſtop internal fluxes of blood, and to cool the inflammations of the Eyes.

CHAP.

CHAP. XXVI.

Of the Spirit of ſweet Vitriol *and ſome other Spirits of* Vitriol.

SOme Writers direct you to pour Spirit of Vinegar upon calcin'd Vitriol, about four fingers above it, and to let them digeſt together for ſome days, then to pour out the Liquor that ſwims at the top by Inclination, and to keep it apart: after that to pour freſh Spirit of Vinegar upon the ſediment, and repeat digeſtion during the ſame time as before, having pour'd out the liquor by Inclination to preſerve it as the firſt, reiterating the ſame Operations ſeven or eight times. This done, they order you to put all the Tinctures into a glaſs-Cucurbit, plac'd in a Cinder-Bath, cover'd with its head, and to draw off the Flegm of the *Vinegar*, and that of the Vitriol, with a ſoft fire, till the ſediment of the Tinctures come to be as thick as the conſiſtence of Honey; and having afterwards mix'd it with ſome handfuls of Sand, or with ſome other ſuch like matter, to put the mixture into a Cornute, or Retort, and with a Gradual fire to draw forth a Spirit of Vitriol which they call *Dulcify'd*. But beſides that this Spirit is not free from Acidity, they cannot call it a true Spirit of Vitriol being rather a Spirit of Vinegar.

Others having digeſted the Spirit of Vitriol upon filings of Steel, pouder'd Coral, or ſome ſuch kind of ſubſtances, upon which the Spirit of *Vitriol* may expend its Acrimony; or elſe having ſingly mix'd the Spirit of Vitriol with the ſame matters they by the uſual ways draw forth a Spirit, which is not ſo tart, as being depriv'd of the moſt acid parts which thoſe ſubſtances have ſuckt up. But this Spirit cannot be accounted otherwiſe then imperfect, ſince it has loſt the moſt part of its good parts I alſo think it is to be rejected, as likewiſe the firſt, and that the beſt dulcifying of the Spirit of Vitriol, is to obſerve the ſame method as for the dulcifying the Spirits of Salt and Niter; by mixing it with equal parts of Spirit of Wine well rectifi'd, and diſtilling the mixture in a glaſs-Alembick in a Cinder-Bath with a moderate heat. For by the inward Union which by that means is made of the acid part of the Spirit of Vitriol, with the volatile Sulphury Salt part of the Spirit of Wine, where ariſes a Spirit much more ſweet in ſavour, and gentle in all its effects, then was the Spirit of Vitriol before its Conjunction. And though we muſt confeſs that this Spirit is compos'd of two, nevertheleſs we muſt have a beter opinion of it, becauſe they unite without the deſtruction of each other, and that by this new diſpoſal of their parts by this Union, that which both of them had of violent is qualify'd, and their joint Operation much more proper and fitted to our nature. So that the uſe of this Spirit is of much more advantage, then that of the ordinary Spirit, eſpecially to thoſe perſons to whom acids are injurious; and that it is much more proper for ſeveral diſeaſes, chiefly the Scurvy. For the Spirit of Wine imparts to the Spirit of Vitriol a Diaphoretick vertue, yet does not deprive it of the quality it has to open obſtructions, and ſtrengthen the parts. This Spirit may be tak'n in a larger doſe then that which is not Dulcify'd.

You may alſo extract from the *Dead Head* that remains after Diſtillation an acid Spirit much leſs violent, then that which is drawn from Vitriol after the ordinary manner, by laying it in a place where it may receive the beams of the Sun, the influences of the Moon and other Stars, with the moiſture of the air, ſo that no Rain may fall upon it, and leaving it there, for ſeveral months or which is better for a whole year. For by this means the dry earth of the Vitriol, being depriv'd of its natural Salt, but not of its Ferment, will be impregnated with the acid Salt of the air, and become in ſome ſort a new kind of Vitriol, whence you may draw by the ordinary ways, and in ten or twelve hours time an acid Spirit, very pleaſing, which ſome call Spirit of Vitriol *Regenerate*, which you may ſafely make uſe of, and with ſucceſs in all diſeaſes, for which the ordinary Spirit of Vitriol is preſcrib'd, giving it in the ſame doſe and in the ſame Liquors.

There is alſo a Compound Spirit of Vitriol to be prepar'd, after the following Method. Beat in a Mortar, and mix four pound of Vitriol calcin'd to redneſs, with five pound of River-Flints calcin'd, and a pound of Salt of Tartar calcin'd to white

whiteneſs, and put them all together into a Retort, and having ſet it in a cloſe Furnace of Reverberation; begin your Diſtillation after the ordinary manner with a Gradual fire, till the Flegm and all the Spirits are come forth. After which having cool'd the Veſſels, and unluted the Recipient, mix the Liquor with that which remains in the Retort, and reiterate Diſtillation, the better to loos'n the parts which are to aſcend in diſtilling. To which purpoſe repeat the ſame operations two or three times over; and then you ſhall have a Spirit, which ſome Authors eſteem very much to open the obſtructions of the Liver, Spleen, and Bowels, eſpecially in Dropſies and Jaundiſe, uſing it as you do the Spirits preceding. *Paracelſus* highly commends a Spirit of Vitriol, which he calls *Corrected*, which he directs to be prepar'd by Cohobating the Spirit upon that which remains in the Cornute after Diſtillation, reiterating the ſame Cohobations and Diſtillations eight or nine times. After which he directs you, that having pour'd the laſt Spirit, upon the ſediment, together with as much rectify'd Spirit of wine as is neceſſary to reduce the whole iuto a paſte, you ſhould put it into a Retort, and diſtil it with a gradual fire as before, highly recommending this Spirit againſt the Epilepſy, giv'n from five or ſix to eight or ten drops in Cephalick waters.

Hartman very much commends a Spirit, which he calls Anti-Epileptick, which he compoſes of equal parts of Vitriol of *Hungary* well purify'd and the Urine of healthy Children, digeſted for ſome time in a glaſs Cucurbit cover'd, in *Balneo Mariæ*, and then diſtill'd in the ſame Bath. Affirming that the firſt water that diſtills is an excellent remedy to cure the pains of the Gout apply'd to the part; and that the ſecond is a particular remedy for all diſeaſes of the eyes. Afterwards he directs you to pouder and put the ſediment into a Retort, and having fitted and luted a large Recipient to the Beak, to draw forth with a naked and Gradual fire, a Spirit of an Auſtere ſavour, and of a Sulphury ſmell, and to rectify it once or twice. Affirming that this Spirit is an infallible remedy for the abſolute cure of the Epilepſy in children, mixing a Scruple of it with the diſtill'd water of Peony-Roots, and Flowers of Tylet tree, and giving half a ſpoonful in the Fit, and continuing the uſe of it by Intervals as occaſion ſerves.

CHAP. XXVII.

Of the Salt and Earth of Vitriol.

IT is not enough to have drawn out of Vitriol by diſtillation, the flegm and ſeveral Spirits which it contains; for there is ſome ſalt part of the Vitriol which remains in the *Caput Mortuum* which remains behind, and which, to ſpeak properly, is a real Vitriol, though moſt writers have tak'n it for ſomething diſtinct, and of another nature then Vitriol. But to have it, ſuch as it is, you muſt make a Lye of that which remains after diſtillation, and having filter'd it, evaporate the ſuperfluous moiſture, that you may have the Salt which you ſhall find coagulated at the bottom of the Veſſel, of a colour inclining to carnation, by reaſon of the impreſſion of the fire which made the Vitriol red. This Salt having the ſavour of Vitriol which is the principal matter, retains alſo the qualities, eſpecially the Emetick. But though the ſmall quantity of this Salt, or to ſay better Vitriol, which remains in the *dead head*, after diſtillation, is not worth the looking after, nor the making of the Lye; yet we are forc'd to do it for the Earths ſake that accompanies it, the aſtringent quality whereof all Writers highly commend. For to have it in its purity, if you will not make a Lixivium, you muſt at leaſt waſh it over and over again, till it be all pure, and without any mixture of the ſalt parts of the Vitriol, that it may have the qualities that are attributed to it; which are chiefly to heal Dyſenteries, Lienteries, and Diarrhæa's, to ſtay vomiting, and both outward and inward Fluxes of blood, to help weakneſs of the ſtomach and bowels, and to cleanſe wounds and ulcers.

But although the ſalt vitriolick ſubſtance which you may draw from the maſs which remains after diſtillation, may have all the vertues which writers have aſcrib'd to the

the Salt of Vitriol; yet the ſmall quantity which is to be got, is the reaſon that white Vitriol is made uſe of, diſſolv'd in water, filter'd and cryſtalliz'd, inſtead of Salt of Vitriol; and that ſo much the rather, becauſe it produces the good effects which are expected from Salt of Vitriol with much more gentleneſs, the chief of which are to expel by vomit or ſtool the bad humours that gather in the ſtomach or in the bowels, to prevent their ſending up vapours to the brain, and their cauſing the Epilepſie, and other maladies of the head; to kill worms, cure intermitting Agues, and to open obſtructions of the Liver and Spleen, the Kidneys and paſſages of the Urine. The doſe is from half a ſcruple to half a dram, in broth or in ſome other proper liquor.

I could here inſert many other preparations of Vitriol, but being out of uſe, I omit them.

CHAP. XXVIII.

Of the Preparation of Sulphur.

THE great reſemblance which there is between the acid Spirit of Sulphur and that which is drawn from Vitriol, of which the firſt is the ground, obliges me to give you the preparation thereof next in order. I intend not to ſpeak of that Sulphur which all Chymiſtry acknowledges for one of the principles of mix'd bodies, not more then of that which is to be ſeparated from Antimony, Cinnabar and ſome other Minerals, of which it makes one part of the Compoſition; but of the Common ordinary Sulphur, which paſſes for a Roſine, or Gum, or fat Oily Mineral juice; which is found in the bowels of the Earth pure or mix'd with it, or with Stones, or in certain waters from whence it is ſeparated by art. The fat Roſiny and Combuſtible part, is that which is in greateſt quantity in the Compoſition of Sulphur, but it is accompany'd with a little Salt, or acid Spirit, ſome little water and ſome Earth, which remains after the conſumption and ſeparation of the reſt of the parts by fire. Brimſtone is brought pure and refin'd to our hands. The beſt is the ſmootheſt, and that which burns without going out when it is one lighted. The colour whereof enclines a little thought toward Green, and is moſt proper for Chymical preparations.

The Gummy and Combuſtible part of Brimſtone prevailing above the reſt and being of it ſelf, it not only riſes with eaſe when it is ſet over the fire in Veſſels, but it carries with it ſome other parts; ſo that there remains little or nothing in the Veſſel, after long expoſing to the fire; as you may obſerve by the following preparation of the flowers of Brimſtone.

Having plac'd an Earth'n Cucurbit glaz'd within, ſomewhat low, and fit to reſiſt the fire upon a Furnace proportionable, lute the inſide of the upper-part of the Furnace, as alſo round about the Cucurbit, ſo that no Flame nor Sparkle of fire may go out that way, to ſet the Sulphur on fire, leaving nevertheleſs round about three or four little Regiſters, with their ſhutters fit to take off or put on as occaſion ſerves. Then having kindl'd a moderate fire in the Hearth-place of the Furnace, put into the Cucurbit about three or four ounces of Brimſtone groſly pouder'd, and cover it with a glaſs-head whoſe mouth may be proportionable to the neck, ſo to ſtreight'n it that there may be no occaſion of any Lute. By this means the Flowers of Brimſtone will riſe, and gather together in the head of the Cucurbit. You muſt always keep a moderate and equal heat under the Cucurbit, take off and keep the Flowers that ſtick to the bottom of the head, and caſt in new Sulphur, as the firſt aſcends in Flowers; and have two heads of the ſame bigneſs; to cover the Cucurbit with the one, while you take off the Flowers from the other. You may alſo make uſe of ſeveral Veſſels at at a time, or of thoſe of Earth made in the faſhion of *Aludels*, having a large beak upon every ſide, to each of which you may fix half-Balls, having an opening at the top, which you may cover with a glaſs-head like the Cucurbit's. And by this means one part of the Flowers will ſublime into the head, the other iſſuing out of the beaks of the Aludels, will ſtick to the inſide of the half Balls, whence you

muſt

muſt take them off from time to time, with a ſpoon fitted for the purpoſe.

Some Writers ſet down preparations of Flowers of Sulphur, with an addition of Myrrh, Aloes, Olibanum, Maſtich, Benjamin, Saffron, *&c.* beating theſe ingredients, mixing them with the brimſtone, and ſubliming them together, as you ſublime the flowers of brimſtone. But though theſe perſons have found ſome Aſſenters; nevertheleſs it being certain, that theſe drugs are not able to endure a fire neceſſary for the ſublimation of the flowers of Sulphur, without a remarkable diſſipation of the beſt parts, I think it better to mingle one or t'other, according to occaſion, with the flowers of Sulphur, without any farther trouble.

The preparation of white flowers of Sulphur, of which *Angelus Sala*, and others after him have preſcribed the receipt, deſerves to be here ſet down.

Take half a pound of calcin'd Niter, and fix'd with Sulphur, according to the method ſet down for *Sal*-Polycreſtes, ſpeaking of the preparations of Niter; and having redue'd it into very fine powder, and mix'd it with a pound of brimſtone in rolls, powder'd alſo, make a ſublimation thereof in a Cucurbit plac'd upon a Sand-bath, cover'd with its head, employing fire and time requiſite. By this means you ſhall have the flowers of Sulphur white, leſs unpleaſant, but at leaſt as efficacious as the Magiſtery of *Sulphur*, of which I ſhall give you the preparation, more out of reverence to the fame of thoſe ancient Authors who have wrote thereof, then for any good opinion I have of it.

CHAP. XXIX.

Magiſtery or Milk of Sulphur.

THE method which moſt Authors have obſerv'd for the preparation of Magiſtery or Milk of Sulphur, is this: They mingle one part of the flowers of *Sulphur*, with three parts of *Salt* Tartar, and having put this mixture into a great Earthen-pot glaz'd within, they pour upon it ſeven or eight times of its weight in River-water; then putting the pot over the fire, and having boil'd the ſubſtances five or ſix hours, or till the flowers of *Sulphur* are diſſolv'd in the liquor, adding nevertheleſs from time to time more boiling water, to ſupply the place of that which is evaporated in boiling. And when the liquor is conſum'd to the half, they empty by inclination the clear liquor warm into a great earthen Pipkin glaz'd within, pourring upon it at the ſame time diſtill'd Vinegar, or liquor of Allum, till the ebullition ceaſe. By this means the acid of the Vinegar, uniting it ſelf with the fix'd *Salt* of the Tartar, which had diſſolv'd the flower of *Sulphur*, conſtrains it to forſake them; and thoſe flowers having loſt their yellow colour in the *Menſtruum*, and having left the pores of the Tartar which the acid of the Vinegar or Tartar has fill'd, ſwimming immediately among all the parts of the liquor, give it the colour of milk, till they come at length to be precipitated to the bottom of the liquor in a white ſubſtance. At which time having pour'd out by inclination the liquor that ſwims at the top, they waſh them ſeveral times in fair water, till having carry'd off by lotions all the acrimony of the Diſſolvent and Precipitant, they become altogether dulcify'd, and fit to be dry'd and kept under the name of Magiſtery or Milk of Sulphur.

There is alſo another Magiſtery of *Sulphur*, which is this way to be prepar'd: Having put into a great Iron-Caldron, a pound of Sulphur in powder, and two pound of Quicklime, and pour'd upon them a good quantity of ordinary water, boil them together till the liquor be waſted to three quarts, or for more certainty till it be become very red, and that you may judg by that, that the Alkali of the Lime has penetrated and diſſolv'd the Sulphur. At which time having paſs'd the liquor through a bag, leave it to cool, and pour out by inclination the clear liquor into a great earthen-Pot glaz'd; then pour upon it Urine very hot, till ebullition ceaſe, and that the fix'd *Alkali* of the Lime being united with the volatile *Salt* of the Urine, leave the *Sulphur* which it has diſſolv'd to precipitate to the bottom. Then leave the ſubſtances to ſettle from the evening till morning. After which having pour'd

pour'd out by inclination the liquor that ſwims above the Sulphur precipitated, waſh it ten or twelve times, till all the acrimony of the Salts be carry'd off.

Writers do very much recommend the Magiſtery of Sulphur, calling it the Balſom of the Lungs, and a ſingular remedy againſt Coughs, Aſthma's, Ptyſicks, and to divert Fluxes of humours that fall upon the breaſt, to facilitate expectoration, eaſe the pains of Colicks, diſſipating the wind of the ſtomach and inteſtines. It is giv'n from five or ſix to ten or twelve grains, in ſome Cordial or Pectoral liquor, reinforc'd with Cinnamon-water.

But by reaſon of the various alterations that happen to Magiſtery of Sulphur, as well in its diſſolutions as in its precipitations, and the ill qualities which it receives from the ſubſtances with which it is mingl'd, and of which the ill ſcent that remains after Lotion is an evident ſign; I think it better to lay it aſide, and rather to make uſe of the Spirit of Sulphur, eſpecially the white ones, of which I have ſhew'd you the preparation, in regard that being leſs unpleaſant, they may be able to work all the effects which Authors promiſe to themſelves from the Magiſtery, giving them from one ſcruple to half a dram.

CHAP. XXX.

Of the Diſtillation of Sulphur.

THE ſmall quantity of Spirit which is drawn from Sulphur, the impoſſibility to have the Spirit without burning the Sulphur, without the aſſiſtance of the air, and the difficulty to meet with Veſſels fit to be made uſe of in this diſtillation, have very much taken up the thoughts of ſeveral perſons, and of ſuch in particular as have not accuſtomed themſelves to ſully their fingers with other Chymical preparations. There is hardly any Author that has not given a different preparation. They have alſo propos'd ſeveral Veſſels, by the means whereof they have promis'd ſucceſs to thoſe that have them, and know how to make uſe of them. But all that others have wrote, does not hinder me from acquitting my ſelf of the obligation that lies upon me of imparting to publick view the moſt eaſie and beſt means which I make uſe of to ſucceed in this diſtillation, and the form of the Veſſels themſelves.

You muſt have at leaſt four ſeveral Veſſels for the diſtillation of Spirit of Sulphur, of which the loweſt, that is to be the biggeſt, and to be of Glaſs or Potters Earth, is to receive the Spirit while it diſtills; the ſecond is to be plac'd in the middle of the bottom of the other, and to ſerve as a prop to the third, which is to contain the Sulphur; and the fourth is to be hung or plac'd in that manner that it may ſtop and make room for the vapours that ariſe from the Spirit of Sulphur, at the time when it burns. The laſt Veſſel is of glaſs, and uſually made like a Bell, bigger or leſſer, and ſometimes open at the top, ſometimes not; but that wherein the Sulphur burns, is to be of Earth fit to reſiſt the fire, and to be upheld by ſome little pot of fine Earth or Glaſs; for if it ſhould reſt upon the bottom of the Veſſel below, it would ſuck up all the Spirit that gather'd together within it. Uſually we ſtay for Rainy-weather, or elſe moiſten the inſide of the Bell and the Veſſel below to facilitate the diſſolution of the vapours, and by that means to obtain a greater quantity of Spirit. It is alſo convenient at the beginning, to put in ſome little water into the bottom of the Veſſel below, that the Spirit may mix with it the more eaſily without changing its nature, ſince it may be ſeparated with all its force, by rectifying it like Spirits of Salt and Vitriol.

I my ſelf for this diſtillation make uſe of large pots, call'd vulgarly *Saloires*, or pondering Veſſels, containing about two Pailfuls. Theſe pots have a Rim round about their upper part, wherein there are three or four holes; which holes I wet, and fill the bottoms with water. Then having put in a little pot of Earth, I place upon it the pot of Earth where the Sulphur is to burn; I chuſe the greeneſt brimſtone, and in ſmalleſt Rolls, and having melted it, and dipp'd Cotton-weiks into it, I kindle and cauſe ſome part of it to burn in the pot, covering at the ſame time

with a Glaſs-Bell, ſuch as Gardners make uſe of, proportionable to the mouth and rim of the pot, and moiſtned in the inſide. By this means, the white vapours that riſe from the Sulphur, finding room enough as well in the capacious part of the pot, as in that of the Bell, and moiſture enough to fix them, diſſolve into Spirit; ſo that you ſhall have a greater quantity by continuing this operation, ſtill putting in and lighting more wicks as the firſt are conſum'd, than by any other contrivance yet found out. You ſhall ſee in this Book the figure of the Pots and their Bell. But the invention would be much more profitable, were it poſſible to make ſuch Pots and as big in Glaſs-houſes; for the Pots of Potters-Earth are not able to withſtand any long time the ſubtle force of the Spirit of Sulphur, which in the end penetrates them, in regard they always ſuck up ſome part, eſpecially if you be not careful to moiſten them within-ſide from time to time.

I have alſo given you the figure of the great Plates of Iron, with which I uſe to receive the Spirit of Sulphur which diſtils from the Bells open at the top, and having two Ears or handles to ſupport the ſticks that bear them; the opening whereof I cover with a little head of Glaſs, to which you may join a ſmall Receiver, proceeding to the diſtillation of the *S*pirit, after the ſame method as before, only that you muſt leave about a fingers diſtance between the brim of the Bell hung and the brims of the Platter, ſo ordering it, that the flame of the Sulphur may not touch the Bell while that the *S*ulphur has enough of air to burn. True it is, you have not ſo great a quantity of Spirit by means of theſe Veſſels, and that one part of the vapours is loſt, neither diſſolving in the Bell nor in the Platter; but the Spirit is very good and penetrative; and uſing a good number of Veſſels, you may have a reaſonable quantity of Spirit.

The Acid of Sulphur paſſing for the foundation, and the firſt and principal matter of Vitriol, to which it communicates its moſt conſiderable vertues; you may with good reaſon attribute to Spirit of Sulphur, almoſt all thoſe of Spirit of Vitriol. But beſides that the ſavour of *S*pirit of Sulphur is much more acceptable than that of Spirit of Vitriol, its effects are much more profitable, as well to quench the heat of Fevers, eſpecially Cholerick, as to reſiſt the putrefaction of humours, to create an appetite, fortifie the Stomach and Vitals, to cure diſeaſes of the breaſt, and particularly Aſthma's and Ptyſicks. And though the moſt part of the world believes, that Salts are injurious to the Lungs; yet I can aſſure them, that ſome years ſince there was a Preacher of this City, who having almoſt loſt his voice, wholly recover'd the uſe of it, by the uſe of Spirit of *S*ulphur; which he took in his uſual drink, in his broths, and alſo among his victuals, and that it was only the *S*pirit of *S*ulphur that I prepar'd him, which cur'd him of ſo ſtrange a diſtemper.

CHAP. XXXI.

Of Salt of Sulphur.

SUlphur conſuming it ſelf almoſt all in the fire, and leaving after its conſumption only a little Earth, we cannot pretend to extract a true Salt, unleſs you will give to this Spirit, as liquid as it is, the name of acid Salt of Sulphur. For that reaſon it is, that Authors who have written of Sulphur, have giv'n us no preparation of its Salt. But Chymiſtry, which upon many occaſions, ſends its aſſiſtance to nature, fails not of means for the preparation of a Salt, to which we may juſtly give the name of Salt of Sulphur, of which I will ſhew you two or three preparations.

Beat a pound of excellent Niter with as much Sulphur, and having plac'd a good Crucible upon the *Culot* or Iron-ſquare in the Hearth-place of the Furnace, and kindl'd about it a good Coal-fire, the Crucible being red-hot, put into it about an ounce of the pouder of Niter and Sulphur, which will quickly light, and when the Flame is paſs'd throw into the Crucible as much new pouder, and ſtill let the Flame ceaſe, till you have thrown it in all. After which keep a quick fire round about the

the Crucible for two good hours: then letting the ſubſtances cool, make a lye in an Iron-Skillet very clean, and having filter'd the hot liquor put it into a Cucurbit in a Sand-Bath moderately hot. Then having evaporated about three quarters of the moiſture, and cool'd that which remains in the Cucurbit, continue to pour upon it by little and little good Spirit of Sulphur, ſo long till you can perceive no more Effervescency. That done, having rekindl'd the bath-fire evaporate in the ſame Cucurbit plac'd there the ſuperfluous moiſture to the thin Film, if you deſire a Salt in Cryſtals, or to the drineſs of Salt if you deſire it in pouder or in the lump. By this means you ſhall have a very white Salt, compos'd of the fix'd Salt part of Niter, and the acid of Sulphur, which may be adminiſter'd with ſucceſs, as well to quench the heat of Fevers, as to open all obſtructions of the Bowels. It is mix'd in ordinary Drink or other Liquors, wherein the pleſiang taſte of the acidity muſt be your rule to go by.

You may alſo prepare a Salt of Sulphur with leſs trouble, obſerving a method which was imparted to me by *Monſieur Freſlin*, a perſon as curious after the knowledg of natural things, as ſolid and judicious in both the one and the other Philoſophy. Put into a Retort of Glaſs large enough, a pound of Niter in Pouder; and having pour'd upon it Spirit of Sulphur rectify'd, till there appear no more Effervescency upon their conjunction, and having well ſhak'n the Retort, entirely to diſſolve the Niter in the Spirit, place the Cornute in a Sand-bath, and having fitted and luted a large Recipient to its beak, begin your Diſtillation with a ſoft fire, then augmented by degrees, by putting the lighted-coals upon and about the Sand-bath, and round about the Cornute, the better to force what is to be forc'd out of the Niter. By this means you ſhall have a good Spirit of Niter very proper for all ſorts of uſes, while the Spirit of Sulphur being ſtrictly united with the fix'd Salt of Niter, makes but one body with it, which is to be found in a lump in the Retort, when brok'n; very white in colour, and very pleaſing for its acidity in taſte; the vertues whereof are the ſame with that before.

The moſt natural reflection that can be made upon this preparation is, that the Niter being compos'd of a double Spirit, the one paſſably acid, the other Sulphury volatile Salt, both engag'd within the pores of a natural fix'd Salt, and that the Spirit of Sulphur being compos'd of parts more ſolid and penetrating then thoſe of Niter, and capable of inſinuating themſelves into all the parts of this Salt; it happens that in the mixture of theſe two ſubſtances, the parts of the Spirit of Sulphur penetrate the whole body of the Niter, and ſo aſſiſted by the operation of the fire, they have ſtrength enough to force out and take the place of the nitrous Spirits, among the parts of the fix'd Salt; to which they unite themſelves ſo cloſely that they make but one ſolid body, the union whereof the fire can hardly ſeparate: the Spirits of Niter fly away in red vapours, and paſs into the Recipient where they condenſe into Liquor.

You muſt alſo conſider, that by this operation you gain the Spirit of Niter, which elſe would vaniſh, when the Salt is calcin'd with the Sulphur. And I beleive that the conſideration of this Spirit's leaving the mixture, ought to make us conceive a very good opinion of the Salt which remains in the Retort; ſo little reaſon we have to fear its Effects. Since that beſides that we uſe Niter as it is for ſeveral Internal uſes, and that we often mix the Spirit in Potions, as alſo in drinks; here remains nothing but the fix'd part of the Niter not only good of it ſelf, but much more excellent by its union with the Spirit of Sulphur which failes not to temper the dreaded Acrimony of the Salt.

You may alſo prepare a Salt of Sulphur, which being nothing inferiour to the former two, is much more proper to purify the maſs the of blood, and to expel by ſweat or inſenſible tranſpiration ſharp and ſubtle humours, and which will be alſo as white and as pleaſant. For this purpoſe put a pound of Salt of Urine, very pure and white into a Cucurbit large and high, and having pour'd upon it Spirit of Sulphur well rectify'd, till Ebullition ceaſe, place the Cucurbit in a Sand-bath over a moderate fire, and evaporate the ſuperfluous moiſture to the Film, ſeparating and drying the Cryſtals; or elſe go on, and evaporate the moiſture to the dryneſs of a Salt. For this volatile Salt of Urine, though fix'd for a time by the Spirit of Sulphur, not loſing its firſt nature, may be able to ſhew its Effects, eſpecially when the acid of the Sulphur which has fix'd it, meets in the ſtomach ſome other body to which it can unite it ſelf, and ſo reſtore to the volatile Salt of Urine its firſt liberty. The volatile Spirit of Urine may be alſo us'd, which to ſpeak properly is nothing

but its Salt diſſolv'd, inſtead of its Salt coagulated, and by uniting it with *Spirit* of *Sulphur*, reduce theſe two *Spirits* into a white and *Salt* body like to that which I have ſpok'n of. They that can away with the acid ſavour of theſe *Salts*, may take from half a ſcruple to half a dram, and ſometimes a whole dram in ſome convenient Liquor.

I omit many other preparations of Sulphur, which may be found in ſeveral Authors, of which ſome are not feaſeable, others not true, and others altogether unneceſſary and out of uſe: referring the Reader to my Galenick Compoſitions for the preparations of two Balſomes of Sulphur there prepar'd.

CHAP. XXXII.

Of the Preparation of Arſenick.

WE look upon Arſenick as a kind of Soote or a Mineral juice, thick, unctuous and participating of the nature of Sulphur, but very contrary to the Balſome of our life. And therefore it is reck'nd in the number of Poiſons, being never made uſe of but with great caution, and after the dangerous parts of it have been ſeparated and corrected by Art. Moſt Authors who confound the names and qualities of Arſenick, obſerve but three ſorts, the white, the yellow, the red. But I find four, of which the firſt is ordinary Arſenick, which is white, and ſometimes in ſome parts tranſparent as Cryſtal: The ſecond, having the ſhape of that Arſenick which I have nam'd, in colour is yellow, and bears the name of *Realgar*, or *Realgal*. The third is alſo yellow, but of a ſcaly ſubſtance, hard to beat, like a Mineral, and bearing the name of *Orpiment*: the fourth call'd *Sandarac*, is of a red colour, very like the ordinary Arſenick in ſhape, and *Realgar*, differing only in colour. The ordinary Arſenick, which is brought us, is a ſublimated ſubſtance of equal parts of *Sea-Salt* and *Orpiment* in pouder, mix'd together in ſublimating Veſſels; ſo that we need not wonder that this Arſenick is a moſt pernicious poiſon, ſince that in its ſublimation, the Acrimony of the Salt, augments yet more the natural Malignity of the *Orpiment*; and that the ſame Salt aſſiſted by the Vitriol, being mix'd with the Mercury at the time of its ſublimation, renders it corroſive, and conſequently a dangerous poiſon. I alſo think it is very ill done of thoſe Perſons that mingle the ſame Salt with Arſenick, or that add to it the Filings of Steel or Copper, when they ſublime it out of a deſign to dulcify it, becauſe thoſe ſubſtances rather increaſe then abate it's Acrimony, which I believe can never be truly qualify'd: not knowing any preparation, that to any appearance is able to dulcify it in ſuch ſort, as that which is call'd the Ruby of Arſenick, which as thus prepar'd.

Beat the Vulgar Arſenick in a Mortar, and having put it into a Glaſs-Cucurbit, of which at the leaſt three fourths muſt remain unfill'd, and plac'd it in a Sand-bath cover'd with a blind head, make ſublimation thereof with a gradual fire, as you do to Mercury. Then throwing away the Fæces, and the pouder, which ſeparating from the Lump, ſticks to the Veſſels, repeat ſublimation, and ſeparation of the fæces and pouder three times. After which having finely pouder'd and mix'd this Arſenick ſublimated with equal parts of Flowers of Sulphur, make the laſt ſublimation, by means whereof the Flowers of Sulphur, uniting themſelves inwardly with the Arſenick, and ſublimating with it, will not only imprint upon it, but alſo take themſeves the colour of Rubies, of which this Arſenick carries the name, and of which ſome Authors recommend the uſe from three or four to ſeven or eight grains, in ſome Confection, Conſerve, or Looch, in Maladies of the Lungs, or in ſuch where there is occaſion to provoke Sweat, as alſo for the cure of Malignant and obſtinate Ulcers, applying it upon them. But notwithſtanding this preparation, though it may be good to lay upon Ulcers, or for external cures, I believe that it is not to be giv'n inwardly; in regard a remedy of this nature ought to be always ſuſpected, and for that there be other remedies and Medicaments far more ſafe then any that can be made of Arſenick.

There is a preparation of Arſenick very ſerviceable for external cures. For they make

make a Regulus of it, out of which they draw a moiſt ſubſtance like Butter, like the Regulus of Antimony, proceeding thus: Having beaten to powder, mix'd, and put equal parts of Niter and Tartar in an Iron Mortar heated, and having put a lighted coal-fire to it, the detonation being paſs'd, weigh ſix ounces of the combuſtible matter in the Mortar, and having beaten them and mix'd them with eight ounces of *Arſenick* or Orpiment, pouder'd in the ſame manner, and four ounces of filings of Steel, put this mixture into a great Crucible, plac'd upon a ſquare Iron in the midſt of a proper Furnace, and having well melted the ſubſtances, pour them ſpeedily out into an Iron Horn, heated before, and rubb'd within with Candle-greaſe, knocking at the ſame time upon the Horn to haſten the precipitation of the Regulus to the bottom; the matters being cold, ſeparate the Regulus from the ſcum of the Metal, which will be at the top, to uſe it in making the Spirit and Butter according to the following method.

Reduce this Regulus to pouder, and having mix'd it with double its weight ſublimated corroſive, put this mixture into a glaſs Retort encompaſs'd with lute, of which two thirds muſt be very near empty. Then having plac'd it in a little cloſe Reverberatory, begin your diſtillation with an immediate, but very ſoft fire; then augmented by little and little, keeping apart the ſmoaking Spirit that comes out firſt, and receiving into another Veſſel the butter-like liquor that will ſucceed. After which, having chang'd the Recipient, increaſe the fire, till all the Mercury of the ſublimate be deſcended. Then expoſe this Butter of Arſenick to the Sun, and when it is diſſolv'd into liquor, keep it in a double glaſs Bottle well ſtopp'd, to eat away the proud fleſh of wounds and ulcers, and to take off the rottenneſs of the bones; which it does with more violence then Butter of Antimony; for which reaſon a leſs quantity muſt be us'd, and with an extraordinary warineſs. The Spirit that comes out firſt, is very corroſive, and will perfectly diſſolve Mars, and penetrate ſeveral other Metals. Nor is it to be wonder'd, that the ſubſtances which proceed from the conjunction of Regulus of Arſenick with Mercury ſublimate corroſive, are more corroding then thoſe drawn from Antimony mix'd with the ſame Mercury corroſive, ſince the parts of *Arſenick* are infinitely more malignant and corroſive then thoſe of Antimony, and for that the mixture of the Mercury ſublimate much encreaſes that very malignity and corroſion.

You may alſo prepare a fix'd *Arſenick*, or a fix'd liquor of Arſenick, thus: Pulverize eight ounces of Arſenick, twelve ounces of Niter, and twelve ounces of Tartar, and having well mix'd them, and plac'd a Crucible upon a Culot, in the middle of a Furnace built under a Chimney, kindle a good fire round about the Crucible, and when it is red hot, throw into it about an ounce of the pouder, leaving the Niter and the Tartar alone to operate upon the Arſenick, and ſtaying till the ſtinking ſmoak that will riſe be gone; continuing this projection, according to the ſame method, till all the powder be ſpent, taking care to ſtir the ſubſtances from time to time with a long Iron-Spatula, to cauſe the Sulphur of the Arſenick to exhale; the malignity whereof you muſt avoid by keeping at a diſtance from the vapours, being as hurtful as their ſcent is noiſome. After which keep a violent fire round about the Crucible for five or ſix hours, or elſe, which will be better, during a whole day, the better to diſſipate what the Arſenick has of evil. Then leaving the Crucible to cool, and having pouder'd the lump which remains within it, ſeparate by often lotions whatever it contains of Salt, and when it is rightly dulcify'd, keep the pouder in a double glaſs-bottle well ſtopp'd; and this is that which ſome call fix'd Arſenick, that ſome commend for a good Sudorifick; but the cheifeſt uſe of it is to cleanſe wounds and Ulcers. For which purpoſe inſtead of waſhing the pouder, it will be enough to expoſe the lump to the moiſture of a Cellar where the Salts diſſolve into Liquor, which you muſt keep in a double bottle well ſtopp'd, by the name of fix'd Liquor of Arſenick: good for the cure of Maligant Cankrous and Fiſtulous Ulcers, eſpecially Venereal, mixing it with Vulnerary waters in a greater or leſſer quantity, according to occaſion.

I ſhall not any farther enlarge upon preparations of Arſenick, as dangerous, as they are little in uſe.

CHAP.

CHAP. XXXIII.

Of the Preparation of Ambergriſe.

THE ſeveral opinions about the Original of Ambergriſe do not at all change its nature. For though ſome have taken it for the ſcum of the Sea; others for the Excrement of certain Birds which appear in the Iſlands of *Madagaſcar*, or in ſome of thoſe toward the bottom of the *Archipelago*: others for the Sperm of the Whale; yet they who affirm it to be a Bitumen that iſſues out of the bowels of the Earth, and empties it ſelf into the *Sea* like Amber, ſeem to be the moſt rational in their thoughts. For if it were the Scum of the Sea, it would retain ſome qualities or things which are contain'd therein. And if it were an Excrement of Birds, we ſhould not meet with it in ſuch huge Uniform Lumps, weighing ſometimes above a hundred pound. Beſides, were it an excrement of Birds or the Sperm of a Whale, it would diſſolve in water, and would not be able to reſiſt ſo long as it does the violence of the waves or the injuries of the Air and Rain, without receiving any notable Alteration.

Ambergriſe according to the latter opinion flowes liquid out of the Entrailes of the Earth: its lightneſs cauſes it to ſwim upon the ſuperficies of the Sea, and its oily ſubſtance is the reaſon that it does not diſſove, and that it has time to be reduc'd by the heat of the Sun into a lump ſufficiently dry and ſolid, which is carry'd by tempeſts to the ſhoars of the *Sea*, where it is found not only in the *Indies* and *America*, but ſometimes in our Seas near the ſhoar, though very rarely. And if at any time it has been found in the body of a Whale, we may well believe that that Creature might have ſwallow'd it for its nouriſhment.

Some Moderns nevertheleſs would aſſure us, that Ambergriſe proceeded from certain drainings of Honey, which having in time been bak'd and dry'd by the heat of the Sun, fall off from the Rocks, where the Bees had made it, into the Sea, the Salt whereof and the Agitation of the Waves perfect their digeſtion, give them that colour and conſiſtency which we obſerve, and at the ſame the remaining parts of the Honey to yield that pleaſing ſcent which the Maſs exhales.

Ambergriſe is generally of a Marble-colour, the ground whereof is ſometimes more ſometimes leſs dark, but inclining to grey and ſpotted with white, inclining ſometimes a very little thought to yellow. It is alſo more or leſs pure according to the leſſer or greater quantity of Extrinſick matter which it meets with, and which mix'd with it while it was yet liquid: inſomuch that you ſhall find the beaks of Birds and little Inſects in it. It may be eaſily meltedover a ſoft fire, when it is true and right; or prick'd with a hot Needle, which melting that part where it enters, raiſes a pleaſing and penetrating ſmell, by which mears you may in part underſtand the goodneſs of the Ambergriſe, which we may make uſe of ſometimes without any conſiderable preparation, only by poudring it with a little bit of Sugar-Candy, when it is to be taken alone, or mix'd with other remedies.

The thinneſs of the ſubſtance of Ambergriſe, is the reaſon that it is never expos'd to the violence of the fire, being contented uſually to diſſolve it in Spirit of Wine, either to ſeparate the Terreſtreities which are mix'd with it, or to keep the diſſolution by the name of Eſſence or Tincture of Ambergriſe. But its odour agreeing with that of all the beſt Aromaticks, and having need of being exalted, we uſually make choice of, and mingle ſome one of thoſe which are the moſt potent, and whoſe odour is moſt ſweet and pleaſing, ſuch as are Musk, Civet, Eſſence of Roſes, Citrons, and the like; careful however to comply with the ſmell and conſtitution of the perſon for whom thoſe Eſſences and Tinctures. To which effect,

Reduce into ſubtle pouder two drams of good Ambergriſe with ſo much the weight of *S*ugar-Candy, and half a ſcruple of Oriental Musk, and having put them into a little Matraſs, and having pour'd upon them two ounces of good *S*pirit of Wine, and half an ounce of Ardent Spirit of Roſes, cover the Matraſs with a little blind-head; and having carefully luted the cloſures, expoſe it to the heat of the Sun,

Sun, or in Horſe-dung or ſome ſuch other like ſubſtance, till the Ambergriſe be diſſolv'd, and that there remain only ſome Terreſtreity at the bottom of the Matraſs; at which time having unluted the Veſſels, and by inclination pour'd out the Liquor that ſwims at the top, into a double glaſs-bottle, ſtop it cloſe, and keep it as a Tincture of Ambergriſe, and as a remedy very proper to reſtore and preſerve the natural heat, to fortify the heart and brain and all the noble parts, to enable both men and women for Generation, and to reſtore the bodies of people waſted by long ſickneſs into a good plight. The doſe is from one or two drops to ſeven or eight in *Spaniſh*-wine, Cinnamon-water, or any other Cordial Liquor.

You may alſo reduce to fine pouder two drams of good Ambergriſe with the ſame weight of Sugar-Candy, and a ſcruple of Oriental Musk, and having added twelve drops in all of diſtill'd Oils of Citron and Orange-rinds, of Flowers of Roſes, Marjoram, Lavender, and Cinnamon, beat them and incorporate them together in a Marble-Mortar with a wooden Peſtle, and make thereof an *Ambergriſe* Eſſencifi'd which muſt be kept in ſome ſmall veſſel perfectly well ſtopp'd, for the ſame uſe as the ſimple Eſſence of *Ambergriſe*, but in leſſer quantity. The quantity of a pea being enough at a time upon the point of a knife, drinking after it a little ſup of *Spaniſh*-wine or Cinnamon-water.

CHAP. XXXIV.

Of the Preparation of Amber.

THE original of *Amber*, call'd by ſome *Succinum*, *Electrum*, *Chryſolectrum*, and *Carobe*, is no leſs conteſted among *Authors* then that of *Ambergriſe*. For ſome will have it to be the Excrement of a Bird, others the Roſiny juice of ſome tree, others believe it to be a Bituminous juice, that flows out of the Bowels of the Earth afterwards coagulated and dry'd in the Sun, and then carry'd by the waves of the Sea where it is found. Which I take to be the moſt rational opinion of all. Writers have mention'd three ſorts of *Amber*, the firſt white, the ſecond yellow, and the third Black. But becauſe that blackneſs happens to the laſt, only through the mixture of Impurities, or through age, we throw it away, and only uſe the white and yellow, of which two the firſt is better then the other, as being better digeſted, more pure, more odoriferous, and more abounding in volatile Salt. However we are forc'd to make uſe of the yellow every day, by reaſon of the ſcarcity of the white, and, for that we extract very near the ſame ſubſtances as we could do from the white.

The ſimple preparation which Galenick Pharmacy makes of *Amber*, by grinding it upon Porphyry is not to be rejected, as well in regard that *Amber* may be very properly given in pouder in the diſeaſes of the brain, ſtomach, and inteſtines, as alſo of the matrix, and in loſſes of blood, and where there is a neceſſity of cloſing the parts; as alſo for that reducing it to pouder, haſtens the diſſolution of the *Amber*, when you having occaſion to make any preparation of it, and among the reſt to extract its Tincture. To which purpoſe put into a Matraſs four ounces of Amber ground upon Porphyry, and having pour'd upon it Spirit of wine very well rectify'd, till it be about four fingers breadth about the ſubſtances cover the Matraſs with a ſmall blind-head, the cloſures whereof muſt be carefully luted: then digeſt them in an Aſh or Sand-bath over a very gentle fire, ſtirring them from time to time till the Spirit of Wine having diſſolv'd the greateſt part of the Amber, it begin to be colour'd of a fair yellow. After which having pour'd out by inclination the yellow liquor into a bottle, put new Spirit of wine upon the ſediment, and cover again the Matraſs with its blind-head well luted; ſet it on the ſame Bath over the ſame heat, and keep it there till the Spirit of Wine have almoſt diſſolv'd the reſt of the Amber, and that it be almoſt colour'd like the former. At which time having unluted the Veſſels, pour'd forth by inclination and mix'd that Tincture with the former, paſs them both through a ſheet of coarſe paper, and put them into a ſmall Cucurbit of glaſs, plac'd in the ſame Bath, cover it with its head, fit a ſmall Recipient

pient to the neck, lute up all the Cloſures, and with a ſoft fire draw off about half the Spirit of wine ; then ſetting the Veſſels to cool, put up in a glaſs bottle well ſtopp'd that which remains in the Cucurbit, and keep it by the name of Tincture of Amber, principally to be us'd in diſeaſes of the Brain and Matrix, giving it from one ſcruple to a dram in proper Liquors.

You may alſo weak'n the Spirit of wine by pouring water upon the diſſolution of Amber, and conſtrain to forſake thoſe parts of the Amber which it had diſſolv'd, and to permit them to precipitate in yellow pouder to the bottom of the Liquor, which is that which is call'd Magiſtery of Amber. But there is no profit in it ; for beſides the waſt of time, fire and Spirit of Wine this Magiſtery is no better then Amber ſimply ground upon Porphiry.

Schroder propoſes a Magiſtery of Amber, which he prepares, by diſſolving it in Vinegar diſtill'd, filtring the diſſolution, drawing off the Vinegar by diſtillation, diſſolving the ſediment in Roſe-water,and filtring the Diſſolution ; all which operations he repeats three times, only he precipitates the laſt diſſolution with Spirit of Vitriol or juice of Citrons, commending it for a good Sudorifick, being giv'n from ſix to twelve grains in Malignant Fevers, and the pluriſy. But the acid of the Vinegar and the precipitants changing the nature of the Juices, I do not believe the Magiſtery can produce the Effects which he aſcribes to it.

CHAP. XXXV.

Of the Diſtillation of Amber.

THE moſt plain and ordinary way of diſtilling Amber is this, fill about a third part of a glaſs Retort with Amber bruis'd ; and having put a little *Sand* at the bottom of a proportionable Gapſula, plac'd in a proper Furnace, ſet the Cornute upon it, well luted round about, and cover'd all over with Sand except the neck ; fit and lute a large Recipient to the neck, cover the *Capſula* with a proportionable Duomo ; ſet fire to the Furnace,and moderate it ſo that the Amber being melted may not boil, nor paſs through the neck of the Retort into the Recipient ; but afford its Flegm by degrees, then its Spirit its volatile Salt and Oil ; of which that which comes firſt will be clear, but that which follows, will colour more and more, till the laſt appear of a brown colour and very thick. This Diſtillation is to be long, at leaſt four and twenty hours. Nor is it neceſſary to force the fire too much, no more in the middle then in the end of the diſtillation : for beſides that the ſubſtances which ſhould come forth are not very weighty, and that too violent a fire would alter them very much ; you may alſo make advantage of that which remains in the Retort as I ſhall ſhew you afterwards.

You may alſo diſtil Amber with a naked fire, putting it into a Retort of Potters Earth or glaſs, luted about, and plac'd in a cloſe Furnace of Reverberation. But if you are not very careful to govern your fire, you may endanger the burning the Amber, forcing it out of the Retort, and breaking the Recipient. And therefore the diſtillation in Sand is to be preferr'd before it. You may alſo bruiſe the Amber when you would diſtil it, and mix equal parts of Gravel, Flints brok'n, or Aſhes which have ſerv'd for Lye. In regard this ſeparation of the parts of the Amber may facilitate, the ſeparation and ſublimation of the ſubſtances, yet never diminiſh their goodneſs.

The Diſtillation of the Amber, being finiſh'd and the Veſſels being cold and unluted,and having ſcrap'd the volatile Salt together, riſen in little Cryſtals and ſticking to the neck of the Retort and Recipient, put it into a convenient bottle. Then after you have pour'd out the ſubſtances contain'd in the Recipient into a Matraſs, waſh the Recipient with hot water, to diſſolve and gather together the volatile Salt and Oil that may remain behind, and pour'd the Lotion upon the other ſubſtances, cover the Matraſs with a blind head well luted ; and having ſet it to digeſt in a *Sand*-bath moderately hot for ten or twelve hours, and often ſhak'd the ſubſtances together, open the Matraſs, and having ſeparated the Oil from the watry, Spiritous and Salt part,

part, make a rectification thereof ſeparately; that is to ſay, that of the Oil, incorporating it with as much waſh'd aſhes as it can ſuck up, putting this mixture into a Cornute of glaſs over a Sand-Bath, and with a very moderate fire drawing off the Oil that will diſtil from thence, of which the firſt will be white and clear, that which follows a little colour'd, and the laſt ſomewhat brown. As for the watry Spiritous Salt part, having filter'd it and put it into a ſmall glaſs Cucurbit, plac'd in a Sand-bath over a ſmall fire, evaporate about three quarters of the ſuperfluous moiſture, then leaving it for ſometime in a cool place, ſeparate and put up the Cryſtals, afterwards evaporating alſo in the ſame Bath the Liquor that ſwims above them, to the end you may ſave all the Salt that remains, though it will not be much more in quantity then the former.

But to make the beſt advantage of all the ſediments, as well of the firſt diſtillation, as of the rectification of the Oil, having reduc'd thoſe ſubſtances to powder, incorporate them with their weight in Quicklime, newly reduc'd to powder alſo, and having put this mixture into a large glaſs Cornute plac'd in a Sand-bath, and fitted a half Ball to its neck, you ſhall draw forth ſtill with a moderate fire a good quantity of Oil, of which the firſt will be very white, the reſt that follows clear enough, though ſomewhat higher colour'd.

Oil of *Amber* is principally made uſe of in *Apoplexies*, Epilepſies, Convulſions, Palſies, and all cold diſeaſes of the Brain and Nerves, but chiefly for the diſtempers of the Matrix. It is alſo highly commended againſt the Worms, and peſtilential air, as well taken inwardly from one or two to five or ſix drops, incorporated with Sugar in powder, and diſſolv'd in ſome proper liquor, as us'd to anoint the Noſtrils, Temples, and Sutures of the Scull; in all which diſtempers you may alſo make uſe of the volatile Salt, which is moreover accounted a ſtrong diuretick and diaphoretick, given in convenient liquors from five or ſix to fifteen or twenty grains.

The diſtillation of *Amber* may ſerve as an Example for the diſtillation of *Aſphaltum*, Jet, Pitcoal, and all ſorts of bituminous ſubſtances.

CHAP. XXXVI.

Of Metals in general.

METals are ſolid, ponderous, malleable bodies, fuſible in the fire, and of a ſubſtance equal in all its parts. For the heat of the Sun, not only making its impreſſions upon the ſurface of the Earth, to aſſiſt the production of things which are in view, particularly plants; but penetrating alſo farther into the inward Maſs, there to impart his heat neceſſary for the ſubſtances which are there conceal'd, he produces continual Generations, which are attended by the growth and perfection of ſuch matters as are there engender'd; of the number of which are Mettals. I alſo believe that as the Plants which the Earth produces, take the firſt matter of their ſeed from the juices of the Earth or the influences of the Stars; ſo that Minerals in the ſame juices find the Elements of their ſubſtances, though very much different from thoſe of Plants; and that this at the beginning muſt be a Metallick ſeminal juice, but capable not only to produce in abundance the Metal, the nature of which it infolds within it, but alſo to receive it ſelf, and to impart to the Metal hardneſs, ſolidity, weight, and thoſe other qualities, which diſtinguiſh it from other Metals; and though the growth and perfection of Minerals be not ſo viſible as that of plants; yet we have no reaſon to doubt, but that according to the exiſtency which the Metals have drawn from the Metallick juice, from whence they had their ſeed, they alſo produce the ſame ſeminal juice which renews and multiplies its own kind, as Plants do. Of which we have no reaſon to doubt, becauſe we ſee that Metals do grow again in thoſe parts of the Mines, from whence others of the ſame nature had been digg'd out before.

But though the Sun has the principal ſhare in the generation, growth and perfection of Plants; that hinders not, but that the other Stars may alſo contribute their

Influences. Nor was it in vain that the Ancients appropriated to every one the name of a Planet; affirming that every Planet had ſome affinity with the Planet whoſe name it bore. Conſidering that the Air, according to the opinion of ſome, contains in it ſelf the firſt ſeeds or ſeminal diſpoſitions of things which the Earth has accuſtom'd to produce, and that without queſtion it has receiv'd them from the Stars, which ſhowre down their influences upon all ſublunary bodies. Of which we ſee the lively effects upon the ſuperficies of the Earth as well in the alteration of certain Earths into ſtones, as in the regenerating of certain Salts, among the reſt, that of Vitriol, and the increaſe and growth of ſome Metals, particularly of Lead.

Writers acknowledg ſix different Metals of which they make three orders: in the firſt of which they have put the two moſt noble and perfect; that is to ſay, Gold, which they call the *Sun*, as well for its yellow colour, as from the particular Influences which they ſay it receives from the Sun; and Silver, which they call the *Moon*, as well by reaſon of its white colour, as for the particular dominion which they think the Moon has over it. In the ſecond Rank they have put Iron and Copper as being leſs noble, leſs compact, and more impure in their ſubſtance, though hard and ſolid. They have alſo join'd them one to the other, as well becauſe of their great inclination to unite together, as becauſe their ſubſtance is not much different, having giv'n to Iron the name of *Mars* and to Copper that of *Venus*, becauſe of the great Sympathy which they imagin'd there was between thoſe two Metals and thoſe two Planets. They have put Tin and Lead in the third rank, as being leaſt hard and more eaſy to melt, calling the firſt *Jupiter* and the laſt *Saturn*, for the ſame reaſon. I come now to the moſt neceſſary preparations of theſe Metals beginning with that of Gold.

CHAP. XXXVII.

Of the Preparations of Gold.

ALL the beſt writers affirm that the Sun has a particular influence over Gold, from whence it comes to paſs that this noble Metal has a peculiar vertue to ſtrengthen the heart and cheriſh the natural heat. I will not diſpute what influences it may receive from the Sun; but many believe that Gold in its natural eſtate, or which it may reſume, though alter'd by many preparations, can no way impart any vertue either to the heart or any other part of the body. Others have laught at the Ancients for putting Leaf-Gold into Confection Alkermes, and into many Cordial powders and other remedies. I confeſs they had reaſon, were it not for what I have related from the mouth of experience it the 313, and 314 pages of this work; to which I refer the Reader. Let it be as it will, ſince there is no danger in the uſe of Gold, I know no reaſon why we ſhould abſtain from giving it in leaves, provided it be well purify'd before hand, any more then from giving it in any other condition being prepar'd according to art.

There are that waſh Gold with Tartar and common Salt, when you would take off the outward filth: but when you find it impregnated with other Metals, either naturally in the Mine, or by Adulteration, you muſt make uſe of other means, the chief of which are are immerſive Calcination Fuſion and Calcination with Antimony, Fuſion and Calcination with Lead in a Cupple, and Cementation.

CHAP.

CHAP. XXXVIII.

Of the Calcination immerſive of Gold, *by* Regal Water, *or by the means of* Gold Fulminant.

PUT into a Matras the quantity of filings of Gold which you intend to purifie, and having pour'd upon it three times as much the weight of Regal Water, plac'd the Matras in a Sand-bath moderately hot; from whence when the Gold is diſſolv'd, pour out the clear liquor into another Veſſel, and after that a ſmall quantity of Regal-water upon the ſediment; then having digeſted them awhile in the ſame Bath, pour'd out by inclination the new diſſolution upon the firſt, and left at the bottom of the Matras the Metals in powder, which the Regal-water could not diſſolve, pour upon the diſſolutions the liquor of Tartar, or the volatile Spirit of Salt Ammoniack, or of Urine, till ebullition ceaſe, and that the moſt part of the coroſive Spirits of Regal-water, having quitted the Gold to unite it ſelf to the fix'd Salt of Tartar, or to the volatile Salts of Ammoniack or Urine, the Gold precipitate to the bottom of the Veſſel in a yellow colour; which muſt be waſh'd in ſeveral Waters, till it be altogether inſipid. By which means you will obtain a Fulminant Gold, very diaphoretick; but it muſt not be waſh'd above once or twice, if you intend to preſerve the purgative faculty which the Salts impart to this Gold. Dry this Lime of Gold with a moderate heat, and give it from three or four to five or ſix grains in ſome Conſerve or Confection.

The violent and wonderful effects of this Fulminant Gold, oblige the Artiſt to great circumſpection, as well in drying it, as in keeping and adminiſtring it. For the leaſt fire taking hold of the volatile and combuſtible part of the Niter, which was contain'd in the Aqua-Fortis before it was regaliz'd, and offering violence to the ſtrict union which the particles of the Salts have contracted with the Gold, cauſes them to give a greater bounce, and more violent then Gunpowder; whence follows a moſt fierce motion, that works its effect from the top to the bottom, by reaſon of reſiſtance which the Gold there meets with. So that a few grains of this Fulminant Gold put into a ſilver-Spoon held over a fire, will make their way through the bottom, kindling into a flame, and making a great noiſe; and indeed one ſcruple of this Fulminant Gold ſhall give a louder bounce, and do more miſchief than half a pound of the fineſt Gunpowder that is to be had. But this Fulmination is not to be fear'd when the Gold is given inwardly; for then the Salt particles which are mix'd therewith, and which make about the third of its weight, meeting with the acids in the ſtomach, and quitting the particles of Gold to unite to them, are not only disengag'd from the union which they had with the Gold, but ſo confus'd with the acids, and by conſequence ſo weakn'd and fix'd, that they can do no farther violence, but leave the Gold its entire liberty to impart all its vertues. By the ſame reaſon, notwithſtanding the diſſolution of Gold in Aqua Regalis, the fulmination may be hinder'd by moiſt'ning the Lime of Gold with the Spirit of Vitriol, Salt, or Sulphur, before it be wholly dry'd, becauſe the acid joining it ſelf to the particles of Salts which were thoroughly united with the Lime of Gold, break the union, and hinder the violence which they would do one to another by taking fire. You may alſo after that dry the Lime of Gold over the fire, make it red hot in a Crucible, or melt it without any danger of Fulmination.

CHAP. XXXIX.

Of the Calcination of Gold *by* Inquart.

THE name of *Inquart* is given to this immerſive Calcination of Gold, becauſe there is mix'd with it three times as much in weight of try'd Silver, ſo that it makes up only a fourth part of the mixture, To which purpoſe having melted in a Crucible an ounce of Silver with three ounces of fine Silver, pour by degrees theſe two Metals melted together into a Copper-Veſſel ſomewhat large and fil'd with water, to cauſe *Granulation.* For by that means they will fall in little Grains to the bottom of the Veſſel. After which having well dry'd theſe grains, and put them into a Matraſs, pour upon them three times their weight in good ſtrong water, and keep the Matraſs over a Sand-bath moderately hot, till the Silver be diſſolv'd by degrees, and that the Gold be precipitated to the bottom in black pouder. At which time, having pour'd out by Inclination the clear liquor that ſwims above the Gold into an Earthen-pot full of water, pour out again upon the Gold a little Aqua-Fortis to compleat the diſſolution of that little Silver that may remain; then having pour'd out the laſt Diſſolution by Inclination, and mix'd it with the former in the Earthen-pot full of water, waſh the *Calx* or Lime of Gold with common water, and having well dulcify'd and dry'd it, make it red hot in a Crucible, where it will become very high colour'd, and fit to be either ſo kept or to be melted in the ſame Crucible, adding thereto a little Borax, and to be caſt in a mold, by which means you will have a Lingot of very pure Gold.

Then put a flat bar of Copper into the diſſolutions of Silver pour'd out and reſerv'd in an Earthen Pipkin full of water. For by that means the corroſive Spirits of the Aqua-Fortis, quitting the Silver which they had diſſolv'd, to ſtick to the Copper, the Silver will either faſten to the Copper-Bar, or precipitate to the bottom where you will find it, after you have pour'd out the over-ſwimming liquor by Inclination, which is call'd the ſecond water. Waſh this *Calx* or Lime of Silver, and having dry'd it, either keep it ſo, or melt it in a Crucible, adding to it a little Salt of Tartar, then pour it into a Mould greas'd withinſide, and you ſhall have a Lingot of very fine Silver.

Then put a bar of Iron in the ſecond water, and by that means the Corroſive Spirits of the Aqua-Fortis which had diſſolv'd the Copper quitting that to ſtick to the Iron, the Lime of Copper will precipitate to the bottom, like the lime of Silver, where you ſhall find it, having pour'd the diſſolution of the Iron into another Veſſel. You may either waſh and dry or melt the Copper, as you ſee requiſite.

You may alſo precipitate the Iron, by pouring upon it ſome pieces of Calamine ſtone, or Zink, and precipitate thoſe new ſubſtances by pouring upon them the liquor of Tartar or of ſome other fix'd Salt diſſolv'd in water, and find their *Calx* at the bottom of the Liquor, and draw from the filter'd Liquor a Salt of Niter fit to make new Aqua-Fortis.

Theſe Immerſive Calcinations of Gold having occaſionally engag'd me to ſpeak of the Immerſive Calcinations of other Metals, I cannot but give an account of the various effects which may be obſerv'd in the Diſſolution or Precipitation of all theſe Metals. And firſt as to what concernes the Calcination of Gold by Aqua-Regalis, we muſt believe, that in regard that Gold ſurpaſſes all other Metals and Minerals, in purity, compactneſs, number and ſmallneſs of its pores, we muſt make uſe of a Diſſolvent, whoſe points may be ſubtle and ſharp enough to enter thoſe pores, and divide the parts of the Gold. Which the Aqua-Regalis may very well perform. For the bigneſs and figure of the points of the water having been alter'd and ſharpned by the mixture of the Salt Ammoniack, become thin enough to enter the pores of the Gold and to divide and diſſolve its parts. But the fineneſs and ſharpneſs of the points of the Aqua Regalis not affording force nor violence of motion ſufficient to divide the parts of other Metals whoſe pores are larger, and conſequently not to be fill'd by them, no wonder that it ſuffers the Silver to precipitate, not being able to diſſolve it.

But

But the Fulmination of Gold diſſolv'd in Aqua Regalis, and its effects downward, contrary to the nature of fire which tends upward, ſurprizes many that are not converſant in Chymiſtry. But I attribute the reaſon to this, that the Combuſtible parts of the Niter, contain'd in the Aqua-Fortis, which is the foundation of the Aqua Regalis, finding themſelves mix'd with the acids of the ſame Niter, which are cloſely and reciprocally united with the Urinous Salt part, and the acid and fix'd Salt part of the Salt Ammoniack, as alſo with the fix'd Salt of the liquor of Tartar, or the volatile Salt part, which is us'd for the precipitation of Gold. I believe alſo that theſe Salts thus united, being deeply enter'd into the pores of the Gold, and retaining the nature of fix'd Salts, in that they long reſiſt the fire, powerfully withſtand all things that endeavour to ſeparate them. So that the Union of theſe ſubſtances not having alter'd the inclination which certain particles of Niter have to take fire, theſe particles being violently agitated by the particles of Fire, which enliven them with ſome part of their Motion, they preſently take fire, but while they ſtrive to tend upward, they are hinder'd in their deſign by encountring the Salts fix'd and united with the Gold, and ſo are conſtrain'd to take that way which they can to make their eſcape, and forcing the Obſtacles which they meet in their way, their effects prove much more violent then they would have been, had they been at liberty. So that the Pores of the Gold and thoſe of the Salts being equal as well in their Center as in their Circumference, the Combuſtible parts of the Niter iſſue forth with the ſame impetuoſity, and break all parts of the Gold alike, as well as of the Salts which kept them enclos'd. For though their force act downward, yet both the upper parts, and ſides of the Gold would be brok'n, were the Gold ſhut up in a Box.

Some have attributed the Fulmination of Gold to the Ponderoſity and compactneſs of the ports of this Metal. But though theſe qualities of the Gold do ſecond very much the force of the Union of theſe Salts, and may be the cauſe of the Extraordinary noiſe which happens when the matters take fire; yet the Salts are the principal Agents in the Fulmination, which is plain by this, that you may make a Fulminating pouder, by mixing three drams of good Niter pouder'd with a dram and a half of Salt of Tartar, and a dram of Sulphur bruis'd together, heaping this mixture together in an Iron-Ladle and holding it over the fire: for ſo ſoon as the leaſt particle of fire touches the leaſt combuſtible part of the Niter, the pouder takes fire with a violent Bounce, which however does not ſmite the Ear like that of Fulminant Gold. And though this pouder act at the ſame time through the whole Circumference, nevertheleſs the Effect of the reſiſtance of the Salt of Tartar is moſt conſiderable, becauſe ſome pouder ſhall make its way through the bottom of the Spoon if it be but thin.

As for the Effects of Aqua-Fortis upon Silver and not upon Gold, it is to be attributed to the largeneſs of the pores of the Silver, and the proportionable bigneſs of the points of the Aqua-Fortis, ſharp enough at one end to enter, and large enough at the other to ſeparate the parts of the Silver; but too big to enter the pores of the Gold, and conſequently to make any diviſion of its parts. As for the precipitation of the Silver by the bar of Copper put into its diſſolution, and the effects of the ſame Aqua-Fortis upon the Copper, though weak'nd by the water in the Pipkin whereinto the diſſolution of the Silver was pour'd, we muſt impute them to nothing but the ſoftneſs of the ſubſtance of Copper, whoſe parts are more ſlenderly united then thoſe of Silver, and the conformity of the pores of the Copper to the points that remain in the Aqua-Fortis, though ſomewhat blunted by the diſſolution of the Silver. The ſame reaſon ſerves for the precipitation of the Copper and the diſſolution of the Iron, whoſe ſubſtance is ſtill more ſoft then that of Iron; as alſo for the precipitation of the Iron and the diſſolution of the Calamine-Stone. But as to the precipitation of the latter by pouring Liquor of Tartar or of fix'd Salt of Niter, that is to be aſcrib'd only to the conjunction of the Corroſive acids of the Aqua-Fortis to thoſe of the fix'd Salts, which is the ground of their incorporating with the Niter. By which may be ſeen the Exiſtence of the inward form of Niter notwithſtanding all the great alterations which the fire or the mixture of extrinſick matters may have caus'd.

I omit the Calciniations immerſive of Gold in Aqua-Fortis reinforc'd with Bay-Salt or Sal-Gemmæ, or in Spirit of Salt well rectify'd, or in Glacial Oil of Antimony, or in other Corroſive Liquors, being unwilling to cloy the Reader.

CHAP.

CHAP. LX.

Of the Purification of Gold *by Cementation, or by Antimony.*

THE great affinity and reſemblance which Cement, made uſe of for the purification of Gold, has with Maſons Cement, has occaſion'd Writers to give this operation the name of Cementation. To which purpoſe you muſt bruiſe very fine three ounces of Brick, one ounce of Salt Ammoniack, as much Sal-Gemmæ, and as much common Salt, and having mix'd them together, well moiſten'd them with Urine, and dry'd them in the air, reduce the ounce of Gold which you intend to purifie into thin plates; and having cut them into thin pieces fit to be put into a Crucible, proportionable to hold the Gold and the Cement, ſtrow the bottom of the Crucible with a lay of Cement, and cover it with plates of Gold, the plates with Cement, and the Cement with plates, till you have cover'd all the plates with Cement, and that the uppermoſt lay of Gold be well cover'd. Then cover the Crucible with a Cover proportionable, which is to have a little hole in the middle, and having well luted the cloſures, leaving the hole open, put the Crucible in the midſt of a Wheel-fire, which by degrees you muſt put nearer and nearer the Crucible, ſuffering the ſubſtances to evaporate through the hole. When you perceive no more ſmoak to come forth, ſtop up the whole, and encreaſe the fire from degree to degree for eight or nine hours, covering the Crucible all over with fire for two or three hours. Then ſetting the ſubſtances to cool, and having unluted the Crucible, take out the plates of Gold, which will be diminiſh'd in their weight by the conſumption which the Cement has made of the other Metals mix'd with it; then having waſh'd, wip'd, and melted them, pour out the Gold into a Mould, you ſhall find it there pure and ſeparated from all other Metals, as alſo from the Silver, if any were mix'd with it; not being able to reſiſt the corroſion of the Cement no more then the other Metals.

Gold is alſo purify'd by Antimony, after the following manner: Put an ounce of Gold into a ſound Crucible, plac'd upon a Culot, in the midſt of the Hearth-place of a Wind Furnace, and having kindl'd a good Coal-fire, make it red hot, then by degrees throw in four ounces of good Antimony powder'd, which melting preſently cauſes the Gold to melt; keep the ſubſtances in fuſion, till you ſee that no more ſparkles fly out, by which you may be ſure that the Antimony has conſum'd all the extrinſick or alien ſubſtances that were mix'd with the Gold. At which time, having heated an Iron-Cornute greas'd within-ſide, pour the ſubſtances into it, and knocking the Cornute to make the Gold deſcend to the bottom; then letting them cool, and having ſeparated all the *Scories* or ſcum of the Antimony, and other droſs that may happen to be there, pour it again into the Iron-Cornute heated and greas'd, and you ſhall have a Gold very pure, of an excellent colour and fit for all uſes.

You may alſo purifie Gold by the Cupel, by melting it with Lead, eſpecially if it be mix'd with imperfect Metals. But becauſe there is often Silver among the Gold, and that this purifying is then uſeleſs, conſidering that the Silver reſiſts the Cupel, this ſort of purifying is rarely made uſe of. And I ſhall ſpeak of it only among the preparations of Silver, where it is proper.

But it is ſo eaſie a thing to have Gold exactly purify'd among the Refiners, or Mint-Maſters, that I could willingly have ſpar'd my ſelf the labour of ſetting down any preparation thereof; but I thought that in ſatisfying the curioſity of ſeveral perſons, the diſcourſes to which theſe preparations engage me, would not be unpleaſing.

CHAP.

CHAP. XLI.

Of Purifying or Refining of Gold *by* Mercury.

THE name of *Amalgama* is given to the mixture which is made of Metals with Mercury in a Mass soft and easy to be handl'd, of which they afterwards make a separation by calcining them together and causing the Mercury by Exhalation to quit the Metal, into the Pores whereof it had made its way. The *Amalgama* of Gold with Mercury is the most in use of all the rest and most considerable. To which purpose, after you have plac'd two little Crucibles in a wind-Furnace, and put into the one six drams of Mercury reviv'd with Cinnabar, and in the other a dram of Gold well purify'd beaten into thin slices, then a coal fire round about the Crucibles, and when the Gold is red-hot, and that the Mercury begins to smoak, add the Gold and the Mercury together, stirring them with an Iron-rod. By which means the Gold and the Quick-silver uniting together will make an Amalgama, which you must pour into a dish half full of water, and having wash'd it and rub'd it in the water to fetch off the Dross, you shall have an Amalgama, gentle, soft, and unctuous in all outward appearance, which you must dry and press out in a Shamay Skin, to fetch out the Mercury which may chance not to be Amalgama'd. Then you shall find the Mercury to weigh about half an ounce, the surplusage of the Mercury being exhal'd away by the fire or press'd through the Shamays Skin; the Gold not being able to contain above three times as much as it weighs.

Some there are that would have you to put this Amalgama into a small Retort, and to draw off the Quicksilver with a a soft and Gradual fire, and several times to repeat Amalgamation, drawing off the Quicksilver as often into a small Recipient fitted to the Beak of the Cornute which will make the Gold very Spungy, and as they say, never capable for the future to unite again with the Quicksilver. But because there is no such thing certain, besides the toil and irksomness of these preparations; the better way will be to put this Amalgama into a Crucible over a small fire, and to exhale but not exalt the Quicksilver, as some would have it; and then to Amalgama the Gold which remains in the Crucible with new Mercury, reiterating the same operations three times. Then mingle and burn gently over the Gold six times one after another double its weight of Flowers of Sulphur, as well to open it the better, as to carry off all the particles of the Mercury that may be remaining. By this means you shall have a *Calx* or Lime of Gold the parts whereof will be perfectly divided, which you must wash and keep for use for the same distempers as Fulminant Gold.

You may yet for more perfection mix this *Calx* of Gold thus wash'd with three times the weight of Flowers of Sal-Ammoniack, well prepar'd and pulveriz'd, and having put them in a proportionate blind Alembick, sublimate them together in a Sand-Bath over a moderate fire; then having at several times wash'd off the Flowers of the Salt Ammoniack, and dulcify'd the Flowers of Gold keep it as one of the best preparations that can be made of this King of Metals.

CHAP. XLII.

Of the Calcination of Gold *with* Harts-horn.

THough the operation of Harts-horn ſeem not to be conſiderable upon Gold, eſpecially if you mix it with the Gold after it is burnt, as the Authors of this preparation would have it done; and though we are to look upon nothing elſe but the ſeparation which it makes of the Plates of Gold, between which it is put; we have however ſome reaſon to believe, that if we ſhould permit the ſubtle and volatile parts of Harts-horn to act upon the Gold, to the utmoſt of their power, they would in ſome meaſure penetrate the parts, and very much contribute of themſelves to its Calcination by fire. At leaſt ſo long as they cannot alter the quality of the Gold, we may by making the beſt advantage of the good parts of the Harts-horn, conjecture that they have acquir'd ſome Exaltation, by the ſtay which they have made with the Gold, or elſe by ſome particles which they may have carry'd off in Diſtillation, according as follows.

Take half an ounce of Gold purify'd by Antimony, and having reduc'd it into thin Plates, and cut thoſe Plates with Sciſſars into very little pieces, mix them with two pound of the ſhavings of Harts-horn. And after you have put this mixture into a large Cornute of Earth luted about, and plac'd it in a cloſe Furnace of Reverberation, with a large Recipient fitted and luted to the neck, make your Diſtillation with a gradual fire, proceeding in all things as for the ordinary Diſtillation of Harts-horn. Then when the Veſſels are cool, unlute the Recipient, and pour into a double glaſs bottle, all that is in it; then pour the Plates of Gold and the ſediment of the Harts-horn into a Baſon; and after you have ſeparated the Gold, and mix'd them with two new pound of Shavings of Harts-horn, put the whole into a Cornute, and make a new diſtillation. Repeat theſe Operations a third time. Then having pour'd out the pieces of Gold with the ſediment of the laſt Diſtillation into a pot fit to reſiſt the fire, and luted on a fit cover, expoſe it to the heat of a Potters Oven for three days. Then when the ſubſtances are cool, having beaten the Gold and the *Caput Mortuum* of the Harts-horn together put them again into the pot that they may reverberate over a moderate fire for ſome hours, or till the whole have acquir'd a colour next to that of Bricks. After which ſeparate by Lotions the harts-horn from the *Calx* of Gold which will keep at the bottom, and having dry'd it, keep it for your uſe.

In the mean time having mingl'd all the ſubſtances that remain in the Recipient, being the product of the three Diſtillations, and having put them into a Matraſs with a long neck, cover'd with its head, ſet them in a Sand-bath; and after you have fitted a Recipient to its neck and carefully luted all the jointures, make a Rectification thereof, as I have already ſhew'd for ſubſtances of the ſame nature. Thereby you ſhall have an Oil, and a volatile Salt, which at leaſt will not be inferiour to thoſe which are drawn from Harts-Horn without the mixture of Gold.

CHAP. XLIII.

Of Tinctures or Extracts of Gold.

YOU may extract a Tincture of Gold proceeding after this method. Take half an ounce of *Calx* of Gold well reverberated, very ſpongy, and of a brown red colour; and after you have put it into a Matraſs, and pour'd upon it Spirit of Wine well rectify'd, and ſtrengthen'd with Salt of Urine, till it ſwim about three fingers above the *Calx*, lute the Matraſs Hermetically, and ſet it to digeſt upon a Bakers Oven, for a month, ſtirring the ſubſtances from time to time, or till the Tincture look

look as red as blood. After that open the Matrass, and pour the Tincture by Inclination into a double glass-Bottle, and having well stopp'd it, pour upon the Lime of Gold, new Spirit of Wine enforc'd with volatile Salt of Urine; then after you have reluted the Matrass Hermetically, reiterate digestion, which must continue as long as at first, repeating the Operation till the Menstruum cease to colour. Then having mingled and digested together all these Tinctures in a Matrass cover'd with a Blind head, carefully luted, for ten or twelve days, pour them into a glass Cucurbit with a streight neck, cover'd with its head, with a Recipient fitted to it, carefully luted, and draw off with a very soft fire the greatest part of the Menstruum, which may serve also for the same uses; and you shall find at the bottom of the Cucurbit a Tincture of Gold very red, very much like Oil; which you may dissolve in all sorts of Liquors and give it from three or four to seven or eight little drops. You may also pour upon this Tincture concenter'd five or six times as much Spirit of Wine well rectify'd, and after some days digestion, draw it off again in a lukewarm *Balneum Mariæ*; and reiterate the same operations several times, to exalt the Tincture the more, to which you may give the name of Aurum Potabile, and look upon it as a remedy fit to give great relief in all Maladies that attacque the Heart or Brain, or other noble parts. For it preserves the natural heat and Radical moisture, restores it when there is occasion, recreates the Vital and Animal Spirits, and restores and preserves the vigour of all the parts.

Quercetanus highly commends a Tincture of Gold; for the preparation whereof he digests Chalk of Lime with Vinegar distill'd, till the Menstruum be become very red, then having pour'd out by Inclination, and separated that Tincture; he returns the Vinegar upon the *Calx*, till no more Tincture will come forth. After that, having drawn off again in *Balneo Mariæ* the greatest part of the Menstruum, he pours upon the Tincture that remains at the bottom Spirit of Wine well rectify'd. Then having caus'd it to circulate for several days, drawn off the Spirit, pour'd new Spirit upon the Tincture, and repeated several times the same Operations, he finds a very red Tincture at the bottom of the Vessel.

Grullingius describes a Glass or Ruby of Gold, which he prepares, with half an ounce of Filings of fine Gold, or of Leaf Gold, and eight ounces of *Hungarian* Antimony pouder'd, which he melts gently together in a Crucible; then having pour'd them into a Bason, and reduc'd them to very small pouder, he calcines them a long time, as you calcine Antimony, when you would make Glass of it, till all the Sulphur of the Antimony be exhal'd. After which, having put some part of the pouder into a little Crucible, and set the Crucible upon a Culot in a proper Furnace, he melts the Pouder, and then pouring it into a Copper-Bason, he there finds the Gold in Glass of a Ruby colour, which he highly esteems for a gentle purger by vomiting; as also to cure the Dropsy and all other cold diseases: as also for an absolute remedy against the small-Pox and the pains of it. He commends it also against the Pestilence and other Epidemick Diseases; to purify the Mass of the blood, and ease the Gout; giving it from one to two grains. He draws also from these Rubies very finely pouder'd a Tincture with the Spirit of Wine rectify'd, of which you may give two full spoonfulls, which never provoking vomiting, or loosening the Belly, most powerfully provokes sweating, cures the most desperate diseases, purifying the blood, correcting humours dispos'd to corruption, and causing the impurities of the body to transpire.

I shall only trouble the Reader with one more Preparation of *Monsieur Langelot*, Who having made him a Philosophical mill of well temper'd Steel, represented in the fourth plate belonging to this book, prescribes that after you have beaten the Gold very thin and cut it with a pair of Scissars into small pieces, to grind it in this Mill from morning till night for a month together, keeping the Mill cover'd with a Paper, to prevent any dust or dross from falling into it. When it is reduc'd to Atoms, he puts it into a Glass-Retort somewhat flat, as are usually those in *England*; and having plac'd it in a Sand-bath, and fitted a small Recipient to the beak, he forces this Gold with a Gradual fire at first, but at length very violent, till it distil in some very red drops. Then digesting them alone, or mix'd with Spirit of Wine Tartariz'd, they become a true Aurum Potabile, without any fear of the mixture of Alien substances. He affirms also that by grinding again the Gold which remains in the Retort, by reducing it into Atoms as at the first in the same Mill, and by repeating the same operations as often as shall be necessary, you may at length alter all the Gold into Liquor. And discoursing upon this preparation, he says that al-

though at first it seem but plain, and require great pains, if you consider it well you shall find it very rational, because he has several times experimented, that this way of grinding, assisted by the natural disposition of Steel, of which the Mill is made, draws to it the admirable Salt of the Air, which insinuating by degrees into the pores of the Gold, hastens its dissolution; and that therefore this Mill is incomparably much better then all the Mortars of Glass, which are to be employ'd. This preparation has in it something so probable, that any person of curiosity and sufficiency would do well to make trial of it.

CHAP. XLIV.

Of the Preparation of Silver.

SIlver has been always accounted a perfect Metal, because it comes nearest to the perfections of Gold of any other Metal, though in it self it be much inferior. The whiteness of the Internal Sulphur of Silver gives it its white colour, as the Internal redness of the Sulphur of Gold imparts its colour to that Metal. Silver in some measure is durable in the fire, but not so durable as Gold. For let it be purify'd never so fine, however it looses some part of its substance and weight, if you keep it too long upon the fire; nor can it long resist the Corrosion of the Salts, as we observe, when that being mingl'd with Gold, it is expos'd to Cimentation. For the Salts corrode it then as well as the imperfect Metals. Which is no wonder considering, that the Internal Sulphur, and all the parts of the Gold are incomparably more pure, more compact, and united then those of Silver which wanting digestion and perfection is much more porous, and those pores also wider, and much less able to resist the violence to which Gold is expos'd, with a lutement of quantity or weight. Which is the reason that Silver cannot be beaten out so far as Gold, and is sooner alter'd by standing in the Air, which changes its colour in a kind of a brown, red especially in damp places.

The natural Dross of Silver taken out of the Mine, or Artificially by Adulteration, force men to seek out ways to refine it. They make use of Lotions to wash off the outward and superficial dross, or else boil it in a Lye made of Tartar and Bay-Salt, according to the practise of the Gold-Smiths. But this lye however always dissolves some particles of the Imperfect Metals, which it meets superficially mix'dwith the Silver, and also to corrode some particles of the proper substance of the Silver, but the quantity is so small, that the Gold-Smiths take no notice of it.

Immersive Calcination is not proper for the Calcination of Silver; for thereby the particles of Imperfect Metals, that are mix'd with the Silver, being also dissolv'd, we can never expect a perfect purity. The better way is to melt the Silver, and to throw among it at several times good Niter, and letting it bur; but neither this being able to refine it from all its Dross, we must be forc'd to make use of Lead, which is only able to consume and separate from Silver all imperfect Metals that may happen to be mix'd therewith, producing out of them a certain Scum of which I shall speak by and by.

CHAP.

CHAP. XLV.

Of the Refining of Silver *by* Lead.

THough the pores of Gold are much closer then those of Silver, and those of Silver much closer then those of other Metals, yet are they so dispos'd, that in Fusion the imperfect Metals that are mix'd with them, as you may observe in their Union for the time with Lead in the Coppel, or in the Alloy of the Mint Masters, this Union I say is not superficial as some have thought: for if it were, the Lyes which are made with sharp and corroding Salts, would be sufficient to carry off those imperfect Metals, and if their union were superficial, when they were melted together, there would be no need of Lead nor Antimony, nor any other means to refine Gold or Silver from all imperfect Metals wherewith they should be mingl'd. But we make use of Lead, because that being easy to melt, and easily melting those other substances which are mix'd with it, it thrusts it self at the same time into their Pores; and for that being, as it is compos'd of spreading Sulphury parts, and easy to evaporate it, unites it self without difficulty with those of other Metals proportionat to them, and forcing them to leave the pores of the Silver, still as the fire of the Coppel closes them, take them along with themselves either in Smoak or Scum. For if the natural closeness of the Gold or Silver hinder'd the imperfect Metals from entring in, and uniting themselves with them, as they do in Fusion, or that by Fusion alone and no other way it were possible to restore perfect Metals to their first condition, we had no need of any other assistance. But the impossibility of succeeding that way, and the advantageous experiments that have been continually made, are the reasons wherefore we make use of Lead.

They who have not all their conveniences for refining of Gold or Silver, do no more then place a good Crucible upon a Culot in the midst of a Hearth-place in a wind-Furnace, and having lighted round about it a good Cole-fire, they melt in the red-hot Crucible about four ounces of Lead; and when it is melted, they cast upon it an ounce of Silver, which presently melts among the Lead. Then they keep a good fire about the Crucible till the Lead and all the other imperfect Metals mix'd with the Silver are exhal'd in Spoke, or converted into Scum at the top of the Silver, which will remain pure, solid, and very white at the bottom of the Crucible. The *Scories* or Dross is call'd by the name of Litharge; for having serv'd to refine the Silver, they remain as hard as stones.

But they who have much Silver to refine, and are provided of Coppels, vaulted Lids, and proper Furnaces, perform their business with much more ease, and more effectually. For after they have plac'd a Coppel of a sufficient bigness in the vaulted *Mouffle*, and the *Mouffle* in a proper Furnace, they heat the Coppel red-hot by degrees in the *Mouffle*, making a fire round about. They melt their Lead in the Coppel, and then the Silver in the Lead. Then keeping a good Coal fire round about the *Mouffle*, they find at length the Silver alone purify'd, in a white and hard consistence in the middle of the Coppel, after the Lead and other Metals are separated in fumes and in *Scories*. However it is so common a thing to get pure refind silver, that there are few that will take the pains to Coppel it. Besides that the internal use of Silver is not so great for a man to find any profit in it by refining it himself.

I omit *Amalgamas* of Silver with Mercury, *Cimentations* with sublimate Corrosive, Calcinations in a Reverberatory, as neither necessary nor useful.

CHAP. XLVI.

Of the Diſſolution and turning of Silver *into* Cryſtals.

THE Simple preparation of Silver is that of its diſſolution and turning into Cryſtals; to which purpoſe they put in a Glaſs Cucurbit plac'd in a Sand-bath moderately heated an ounce of Silver refin'd by the Coppel reduc'd into grains or into thin ſlices, and having pour'd upon it three ounces of good Spirit of Niter, the ſubtle and penetrating parts of that Spirit being forc'd into a violent motion, and thereby very much heated, diſſolve and pierce the whole body of the Silver. After which the Motion of the Spirits of Niter being in ſome ſort ceas'd, the red vapours which appear'd at the top of the diſſolution being diſſipated, and the Veſſels cool'd, pour out the clear Liquor by inclination into a Cucurbit, and having plac'd it in a Snad-Bath cover'd with its head, lute the cloſures, and fit and lute a ſmall Recipient to the Beak, and draw forth with a moderate fire about three quarters of the Spirit of Niter which you made uſe of. Then letting the Veſſels cool, unlute them, and you ſhall find at the bottom of the Cucurbit the Cryſtals of Silver, and at the top ſome part of the diſſolution which was not Cryſtalliz'd, Which being pour'd out by Inclination into another ſmall Cucurbit; you may evaporate again in the ſame Bath to the Pollicula, to Cryſtallize it in the Cold; or elſe you may dry it altogether upon the ſame Bath, and keep this Lime of Silver in a double glaſs bottle well ſtopp'd after you have dulcorated it by ſeveral Lotions,and thereby ſeparated the moſt conceal'd parts of the Spirit of Niter.

As for the Cryſtals in the Cucurbit, after you have dry'd them well, keep them in a double glaſs bottle, to purge the brain from its ſuperfluous humours, in Epilepſies, Apoplexies, Lethargies, *&c.* giving from one half to two grains, and not to eight or ten as ſome have preſcrib'd, their effects being too violent, and their qualities tooCaſtick to give ſo great a doſe.TheSpirit which ſhall have drawn off will ſerve to diſſolve Quick-Silver. The Cryſtals of Silver are call'd Cryſtals or Vitriol of *Luna.*

CHAP. XLVII.

Of the Tincture of Silver.

PUT into a Matraſs an ounce of Silver, refind in a Copple; and reduc'd into thin plates or grains, and having pour'd upon them three ounces of good Spirit of Niter, place the Matraſs in a Sand-bath moderately hot, leaving there till the Spirit of Niter have very well diſſolv'd the Silver. Then impregnating a pint of common water with as much Salt Marine as it is able to ſuck up, filter it into a clean Earthen-Pipkin, and pour upon it by Inclination the diſſolution of the Silver, leaving at the bottom of the Matraſs that little feces which ſhall be ſettl'd there. By this means the Bay-Salt uniting with the Salt Sulphury volatile part of the Spirit of Niter, and the Salt fix'd part of the ſame Salt uniting it ſelf to the acid of the ſame Spirit, this Spirit will certainly quit the Silver which it had diſſolv'd, and ſuffer it to precipitate to the bottom. Which it ſhall be more and more forc'd to do, if you pour a good quantity of Fountain water, or River-water clear and ſtrain'd through a fine Cloth, upon the ſubſtances. For the Spirit of Niter finding it ſelf weak'nd of all its parts, will leave all the particles of Silver which it had diſſolv'd to precipitate to the bottom, without the neceſſity of any ſhog or thruſt to be given by the Salt water to the Spirit of Niter, or to the Silver; ſince not all the ſhogs nor violences whatever that can be give to this diſſolution, whither

whither with the hard or any more ponderous and ſolid ſubſtance then Bay-Salt, could ever do that, which the parts of the Sea-Salt do without ſhake or ſhog, by uniting themſelves with the parts of the Spirits of Niter, whoſe pores they fill, while the pointed parts of the Spirit of Niter, enter reciprocally into thoſe intervals which they leave. Of which you will be certainly convinc'd if you evaporate to the film, the liquor that ſwims above the Lime of Silver, after it is precipitated: for you ſhall find at the bottom of the Veſſel a Cryſtalline Salt compos'd of Bay-Salt and Spirit of Niter, which united together juſt upon the precipitation of the Silver.

Afrer this precipitation let the Lime of Silver ſettle, then having pour'd out by Inclination the clear Liquor that will ſwim uppermoſt, waſh and waſh again the ſediment with clear water till it be perfectly edulcorated. After that having dry'd it, put it into a Matraſs, and adding to it an ounce of volatile Salt of Tartar, and as much of the Salt of Urine, pour upon it twelve ounces of Spirit of Wine well rectifi'd; cover the Matraſs with another leſſer, inſtead of a blind-head, and having carefully luted the cloſures with a wet bladder, ſet the Veſſel upon a Sand-bath, or upon a Bakers Oven, where you muſt leave it fifteen days or three weeks, ſtirring the ſubſtances from time to time, till the Spirit of Wine look of a fair Cœleſtial blew colour: at which time having unluted the Veſſels, pour out this Tincture by Inclination into a double glaſs bottle carefully ſtopp'd, and keep it for uſe as it is, or elſe having put it into a Glaſs-Cucurbit with a cloſe neck, place in an evaporating Bath, and covering it with its head perfectly well luted, draw off about two thirds of the Spirit of Wine, and you ſhall find at the bottom of the Cucurbit the Tincture concenter'd, which you muſt put up as you did the firſt.

This Tincture is only a diſſolution of ſome particles of the Silver which the volatile Salts of Tartar, and Urine have carry'd off, and were afterwards exalted by the Spirit of Wine. However it is very much recommended in Apoplexies, Epilepſies, Vertigo's, Megrims, and other maladies of the brain, being taken in proper Liquors from five or ſix to twelve or fifteen drops. You may add to the Lime of Silver remaining in the *Matraſs* the ſame quantity of the volatile Salts of Tartar and Urine, and Spirit of Wine rectifi'd, and having cover'd the *Matraſs* again with a Blind-head, reluted the cloſures, and repeated the ſame ſtirrings and digeſtions, extract a new Tincture. After which you may make advantage of the *Calx* of Silver remaining in the *Matraſs*, cauſing to melt and fulminate a little, in a Crucible red-hot in the fire, an ounce of Tartar, one ounce of Flints in pouder, four ounces of good Niter, and two drams of pouder of Coal, and pouring theſe ſubſtances melted into a *Mortar* heated; afterwards when they are cold, having mix'd with the *Calx* of Silver as much as it weighs, and put the whole into a Crucible upon a melting fire, this Lime will reſume its former body of Silver, which you make uſe of as before for any ſort of preparation. The fix'd Salts of Tartar and Niter are here abſolutely neceſſary, to hinder the volatility of the Salts of Tartar and Urine, wherewith the Lime of Silver was digeſted, and to fix the parts of thoſe Salts, which have inſinuated themſelves into the pores of the Lime, and would otherwiſe carry away ſome part in evaporation. The pouder of Coal and Flints ſerves to cauſe Fulmination, and to cauſe the volatile Spirits of Niter to exhale, which are oppoſite to the effects of the fix'd Salts, here requir'd.

Some there are who to good purpoſe extract a Tincture of the *Calx* of *Silver* with *Spirit* of Vitriol dulcifi'd with *Spirit* of Wine well rectifi'd, according to the method which I have deliver'd in its proper Chapter. Nor ought this Tincture to give place to many which Authors have imparted, the receipts of which might cloy the Reader. And therefore I ſhall add no more preparations of *Silver* more curious then neceſſary.

CHAP.

CHAP. XLVIII.

Of the Cauſtick Luna, *or* Infernal *Stone.*

REduce four ounces of *Silver* refin'd to the height into Grains or Plates, and having put it into a proper Glaſs Cucurbit, pour upon it twelve ounces of good *Aqua-Fortis*; and having plac'd the Cucurbit in a *Sand*-Bath moderately hot, leave it there till the *Aqua-Fortis* have abſolutely diſſolv'd the *Silver*; and alſo if you think fit, having cover'd the Cucurbit with its head, and ſomewhat increas'd the fire of the Bath, draw forth about half the ſtrong water to ſave it for ſome diſſolution of Mercury. If not, having evaporated it half in the ſame Bath, and ſuffer'd the ſediment to cool and cryſtallize, place a good German Crucible upon a Culot, in the mid'ſt of the fire-place of a ſmall Furnace, and after you have kindl'd about it a ſmall coal-fire, put into the Crucible one part of the diſſolution of *Silver*, from which you muſt by little evaporate the moſt part of the Spirits of the *Aqua-Fortis*, adding thereto at ſeveral times all the other Cryſtals, moderating the fire for fear the ſubſtances coming to boyl, ſhould run over and ſpill, and continuing it till the diſſolv'd *Silver* become as it were dry in the Crucible, and that the red vapours of the *Aqua-Fortis* that you ſee riſe, begin to ceaſe. At which time increaſe your fire to melt the Silver, which after ſome few boylings will deſcend to the bottom of the Crucible, and when you obſerve a conſiſtency like that of a thick Oil, take out the Crucible with a pair of tongs, and gently pour out the melted Silver into proper moulds, being heated before, and greas'd with candle-greaſe, where the Silver will coagulate into brittle ſtones of a blackiſh colour, which you muſt ſuffer to be half cold; then turn them out of the moulds upon a Table, and put them up in boxes, or proper veſſels, ſo that the air may not come at them to ſoften the ſtone, and abate the quality of the Cauſtick.

This Stone ſpeedily cauterizes the fleſh or the bones upon which it is applied; provided you moiſt'n the end of the Stone, or the part upon which you would have it operate. And this effect muſt be attributed to the laſt ſpirits that remain in the pores of the Silver, and are petrefied with it; which work more ſpeedily, or more ſlowly, and with leſs violence, as they were diſſolv'd with a greater or leſs quantity of moiſture. We muſt not think however that the Silver diſſolv'd in *Aqua-Fortis*, or in ſpirit of Niter, is only cauſtick, when it is petrefied with the laſt ſpirits; becauſe the cryſtals of Silver, of which the ſtones are made, are more cauſtick than the ſtones themſelves, and that the ſimple diſſolution of Silver in *Aqua-Fortis* burns with more ſpeed and violence then the ſtones or cryſtals, as experience teaches, if the leaſt drop chance to fall upon the hand; for it burns immediately, and very deep, if you do not waſh the part to weak'n and carry off the Cauſtick Spirits of the *Aqua-Fortis*. Which is not to be wonder'd at. For beſides that, the *Aqua-Fortis* has nothing in it hardly but what is cauſtick; the Salts are not able to act as they ſhould, but when they are diſſolv'd. We alſo find that the infernal ſtone does not burn at all but when it is wet. For that reaſon alſo the diſſolution of the Silver in *Aqua-Fortis* burns more ſuddenly then the Stone, being not only liquid, but made ſo by the *Aqua-Fortis*, or by the ſpirit of Niter, which are cauſtick in all their parts, and able to act alone beyond the force of the ordinary water made uſe of to diſſolve and force to action the ſalt parts of the infernal ſtone.

CHAP.

CHAP. XLIX.

Of the Preparation of Iron.

IRon, Copper, Lead and Tin, are call'd imperfect Metals, neither being ſo pure as Gold or Silver, and for that their parts are leſs compact, and leſs able to reſiſt the violence of the fire. However Chymiſtry finds in them ſeveral good remedies, eſpecially in Iron, though it be compoſed of Earth, Sulphur, and impure Salts, ill digeſted, and ill united. So that being expoſed long to the fire, it turns by degrees almoſt all to droſs; not being proof againſt the violence of the air, which penetrates and corrodes it in time. Iron is call'd by the name of *Mars*, whether employed for the making of weapons of war, of which *Mars* was ſaid to be the God; or becauſe of the influences which Iron receives from that Planet. We alſo give the name of Steel to that Iron whoſe ſubſtance being purified, and parts more compact, made ſo by putting the bars of Iron into a great fire for ſome hours among horns of Oxen, or of other Animals, and coals of Willow or Beech, which conſuming the groſſer impurities of the Iron, refine and cloſe up the principal parts, after that by heating the bars red-hot, and quenching them ſeveral times in aſtringent waters or decoctions, which cloſes and renders the parts more compact.

The impurity of Iron is the reaſon that Steel is preferr'd before it in all preparations wherein that metal is made uſe of, and that we uſually take the filings, eſpecially thoſe of Needles, as being moſt pure and moſt eaſie to be had; though I will not ſay but that ſometimes we may prepare the Steel in Plates alſo.

We have been mightily puzzl'd from time to time to know, why men have attributed to Steel ſo contrary qualities, or at leaſt very different in their effects, the one to open, the other to cloſe. The difficulty to underſtand this has been the greater by coming to conſider, that no diſtinct ſeparation can be made of the parts of Steel, whatever art we can uſe. For in vain we promiſe to our ſelves either an Earth, or a Salt, or a Sulphur diſtinct; ſince that after all the preparations we can make, it ſeems to be equal throughout its whole ſubſtance, though it is apparent that its internal Salt and Sulphur have ſuffer'd ſome diſſipation. And therefore ſince we cannot ſeparate its various ſubſtances as we do thoſe of Animals or Vegetables, it is in vain to attribute to its Earth an opening, and to its Salt an aſtringent vertue. For being united, and as it were inſeparable, they cannot act but by conſent, and receive jointly the good or bad impreſſions that may happen; ſo that according to all probability *Mars* never acts but according to the preparations which we make of it; or rather according to the various Juices, Acid, or *Salt*, volatile or fix'd, ſimple or compound, which it meets with in the ſtomach. For we often obſerve, that the filings of *Steel*, taken inwardly for ſome mornings together by perſons of a ſtrong conſtitution, have not only been diſſolv'd in the ſtomach, but has open'd obſtructions of the Liver, *Spleen*, and Matrix, which many other Medicins carefully prepar'd could not unſtop. Which we ſhould do ill to impute to the proper Salt of the filings of Steel, becauſe its inſeparable from all the other parts, but to the Edulcorating the acid or *Salt* juices in the diſſolution which they have made of the *Steel*. For ſince we find by experience, that ſteel is not hard to be diſſolv'd, and that not only the Tartar which abounds in *Salt* accounted fix'd and the acid *Spirit* of *Sulphur*, as alſo that of Vitriol, Bay-ſalt and Niter penetrate it and diſſolve it almoſt equally, but that Wine and Water alſo penetrate and diſſolve the filings; we have great reaſon to believe that the juices as well acid as *Salt*, or if you pleaſe of a midling nature, melting with the *Steel* in the ſtomach, fail not to fix to it and diſſolve it, and that from this diſſolution ariſes the liberty of the parts of the body upon which thoſe juices operated, and their Reeſtabliſhment in their firſt condition, and their natural Function. Whence it happens that the ſtomach, the Inteſtines, and other parts are eaſily freed from the ill humours that oppreſſed them, and that reſuming their neceſſary vigour every one of thoſe parts keep open, or ſhuts up its peculiar paſſages according to occaſion. Not that we can attribute theſe opening effects to the *Salt* of Mars, no more then the binding quality to its Earthy part, ſince they are inſeparable from the whole, and that to ſpeak properly they are only fit to attend in the

Stomach

Stomach the operation or effects of the acid juices which they may there meet with.

Nor muſt believe that the hardneſs and cloſeneſs of *Steel* beyond Iron, the pores whereof are bigger and more open, render it leſs proper for all ſorts of preparations, ſince we ſee by experience that *Spirit* of Vitriol and raw Tartar, equally diſſolve both the filings of Iron, and that of Needles, which are made of the fineſt *Steel*, and the beſt temper'd, and by conſequence, the moſt compacted and cloſe: and that the putting a Roll of Brimſtone to a ſquare piece of *Steel* ſparkling hot out of the Furnace will make it melt like butter. In regard alſo that this hardneſs may be advantageous to ſtop and buſy the diſſolving parts of the juices which it may meet with in the ſtomach, and for that in truth the pure Metals are much better then thoſe which are not ſo; for which reaſon all the beſt Writers have preferr'd *Steel* before Iron in all ſorts of Preparations, and that if we were to ſeek for a diſtinct *Salt* in the Iron, it would be rather in that which is purify'd, then in the *Scories* or droſs that is ſeparated from it, which is nothing but the impurity of the Iron of which the *Steel* is made.

Now becauſe the Union of the ſeveral parts of *Mars* is ſo ſtrict, that they cannot be divided by any Art, and that they are always altogether in every part of the ſubſtance, which abſolutely grants a great Stipticknes in all the preparations of *Mars*; and that the operation of this Metal muſt follow that of the acid or *Salt* juices which diſſolve it in the ſtomach, we ſhould do ill to imagine that we are able to prepare a *Mars*, of it ſelf truly opening or purely aſtringent. But that hinders not me from ſetting down here what preparations have been made of it. For without attributing to either any particular opening or aſtringent quality, preferrable one before an other, I am perſwaded that the more *Mars* is open'd by ſeveral Calcinations, it is ſo much the fitter to be diſſolv'd in the ſtomach by the juices which it meets with, and to attend and ſecond afterwards the effects of the ſame juices, and to fortify as it does at the ſame time all the parts.

CHAP. L.

Of Saffrons *of* Mars *opening and Aſtringent.*

THE moſt ſimple, moſt innocent and reddeſt *Saffron* of Mars, by Writers qualifi'd for Aſtringent, is that which is gather'd from the Bars or Plates of Steel, expos'd a long time to the violence of the fire, and which is found upon occaſion, upon the ſuperficies of the Bars, which have for ſome time born the Retorts or other Veſſels, in Reverberatory Furnaces. You may alſo ſpread the filings of *Steel* in a *Capſula* of Earth flat and broad, and having plac'd it in a convenient place in a Glaſs-houſe Furnace, keep them till they are become very red and very ſmall. You may alſo mix the filings of *Steel* with their weight of Bay-Salt decrepitated and very finely pouder'd; from which you may afterwards ſeparate the Salt by ſeveral Lotions: then dry and put up this pouder, giving it from half a Scruple to half a dram in an Egg, in ſome Conſerve, or in ſome proper Liquor.

Saffrons of *Mars*, call'd Aſtringent, may be alſo prepar'd, by putting four ounces of filings of thin plates of Steel in a great Glaſs Cucurbit, cover'd with lute about half way and plac'd in a Sand-bath moderately hot, pouring upon them by degrees and at ſeveral times the quantity of about a pint of Spirit of Salt, Sulphur, Niter or Vitriol, or Vinegar, or if you pleaſe, *Aqua-Fortis*, leaving the whole together till the *Mars* be equally diſſolv'd. Then having tak'n it off and cohobated the Water three or four times upon the reſidence, or elſe the Spirits made uſe of; and forc'd the Diſtillation in the laſt place, till the reſidence, be abſolutely dry; you ſhall find at the bottom the Steel of a brown red colour, which afterwards being expos'd to a fire of Reverberation for ten or twelve days, will become perfectly red: then having well waſh'd it and dry'd it, keep it for your uſe.

The

The natural Astriction of Steel, and that which the Dissolvants bequeath to it, may well in some measure give way to the Astringent quality which is attributed to it, as also impart to it some good success when it meets not in the stomach with those juices which can hinder its operation. But the effects of the Steel are not always the same; for this Metal meeting in the stomach with juices which are able to corrode and dissolve it, it is in some sort constrain'd to obey the operation, and second the qualities of the same juices. Nevertheless we must believe that being only alter'd by the dissolvants it does not loose all its qualities, by means whereof, it gives nature time to recover her strength; so that carrying off the impurities which it was burden'd withal, and restoring the necessary course and Circulation to the blood, the Vital and Animal Spirits, it reestablishes the Functions of all the parts, and gives them all the strength which they have need of for their preservation.

Notwithstanding the Manifest astriction which is to be found in *Mars*, and in all its preparations: yet have several Authors made use of various means to prepare a Saffron of *Mars* which they call Aperitive. For sometimes they have mingled equal parts of pouder'd Sulphur with filiugs of Steel, and having put them into an Earthen Pot sufficient to resist the fire, and the Pot upon a Culot in the middle of the fire-place of a proper Furnace, they environ'd it with lighted Coals and kept a good fire round about, stirring the substances from time to time with a long Iron-Spatula, till the Sulphur being consum'd, the Steel was become very red; after which they ground it upon Porphury to subtilize it. Sometimes they heated square pieces of Steel in a Smiths Forge, and when they were become as it were white in the fire and full of Sparkles, pressing it against great Rolls of Brimstone, they caus'd it to melt and drop into an Earthen Pipkin full of water; then having well separated the Sulphur, and finely pouder'd the clots of Steel, they kept the pouder of a brown colour, which some call'd black Aperitive Steel; which sometimes they have reverberated with Sulphur to make it look red, and to pouder it more finely. Sometimes having sprinkl'd small thin plates of Steel with Spirit of Vitriol or Sulphur, and having expos'd them to the Air for four days, they have separated from them a whitish and sweetish flower; then continuing to sprinkle them, and separate the flower, and repeating often the same operations, the Pores of the Steel finding themselves more and more open, they have gain'd a good quantity of Flowers, which they call'd white Saffron of *Mars*. At other times they have only expos'd to the Sun or to the Air the thin plates of Steel, or else they have sprinkl'd those plates or filings with water, from whence they have afterwards separated the yellow rust by Lotion, driving it afterwards and keeping it so, or else reverberating it with Sulphur in pouder to give it a red colour. All these preparations are almost of equal goodness and their effects may answer to the intentions of the preparer, which is to open; when the Acid or Salt juices which are in the Vessels, especially in the Stomach, abandoning the substances which they have fix'd, to apply themselves to the dissolution of the Steel, the same dissolution, not being able to fix them any more, serves to open the Passages, and carry off the separated humours of the Salts which have fix'd them.

As to the red colour which happens to Steel in diverse Calcinations, though it may be attributed to its internal Sulphur, yet we may more rationally impute it to the External Acids of the Salt, Sulphur, or Dissolvants, particularly to those of the fire, which insinuating into it's Pores, increase also its weight. In regard we find by experience that the red colour of Steel increases and hightens in the fire, if sprinkl'd with Spirit of Sulphur or any other acid. We see also that the faireſt *Reds* are not highten'd but by acids, which in a moment will change a black colour into a very red one.

CHAP. LI.

Of Salt *of* Mars.

THough we cannot boaſt our ſelves able to draw out any true Salt from Mars, and that all which we call Salt of Mars, has only the appearance, I think my ſelf oblig'd however to ſay ſomething thereof. This Salt is prepar'd generally by putting what quantity ſuffices of filings of Steel into a broad glaſs Platter, or in an Earthen Platter of Potters-Earth; where after you have moiſten'd it with Vinegar, then dry'd it in the Sun, or over a very gentle fire, and ground it upon Porphury, moiſten it again with Spirit of Vinegar; then dry it and bruiſe it again, and repeat the ſame operations till the *Steel* be well impregnated with an acid ſweetiſh ſavour. At which time having well ground it, and put it into a glaſs *Cucurbit*, in a Sand-bath, pour upon it a good quantity of flegm of Vinegar, ſtirring the filings well therein to facilitate the Diſſolution of its parts, which the Spirit of Vinegar has corroded. Then having heated the bath by degrees, boil the ſubſtances for two or three hours, pouring in new flegm of Vinegar in the place of that which ſhall be conſum'd. Then leaving the bath to cool and having filter'd the Liquor, evaporate it in a Glaſs Cucurbit in a Sand-Bath, over a moderate fire to the Pellicula or Film; and being cold, after you have pour'd by Inclination into another Veſſel, the Liquor that ſwims above, ſeparate and dry the Cryſtals, afterwards evaporating and Cryſtallizing the Liquor, till it be chang'd into Salt, which you muſt put into a Matraſs; and having there pour'd upon it Spirit of Wine well rectify'd, four fingers above the ſubſtances, cover the Matraſs with a blind head, and having well luted the cloſures, after a digeſtion of three or four days', draw off the Spirit by diſtillation over a gentle fire and keep the Salt for your uſe.

This *Salt* is compos'd of nothing but the Salt of Spirit of Vinegar, and ſuch particles of Steel as the ſame Spirit has diſſolv'd, which you may precipitate, if you pour upon the Diſſolution the Liquor of Tartar or of any other fix'd Salt. However it is recommended by Writers for the opening obſtructions of the Liver, Spleen and Matrix, as alſo for the cure of Dropſies; giving it from five or ſix to twelve, fifteen or twenty grains, in opening Liquors. But the ſharpneſs which the diſtill'd Vinegar has given to this Salt, and the augmentation of Aſtriction which proceeds from thence, added to thoſe other reaſons which I ſhall give, aſſure me that the preparation of *Mars* which I ſhall produce, is far beyond this.

Get a pan of new Iron, thick, ſomewhat hollow, well beaten and ſmooth within, of an indifferent bigneſs, and ſetting it upon ſome Table or Cupboard in ſome convenient place, weigh out in a glaſs Bottle eight ounces of good Spirit of Wine, and as much Spirit of Vitriol well rectify'd, and having well mingl'd them, pour them out gently into the Earthen pan; then having cover'd them with a ſheet of Paper, let them to ſtand for twelve or fifteen days, or till the two united Spirits have diſſolv'd by degrees ſeveral particles of the proper ſubſtance of the Pan, and incorporated themſelves therewith in a white Salt, enclining ſomewhat to grey, and till this Salt be dry'd and fix'd to the bottom and ſides of the pan: whence you muſt take it off, and having beaten it to pouder in a Marble or glaſs Mortar, ſtop it up in a Pot for your uſe, giving it from half a Scruple to half a dram, as one of the beſt remedies that can be drawn from *Mars*, and which may be truly call'd the Soul of the Liquor. This Salt may alſo paſs for a ſingular Example of the change of the liquid formes of the *S*pirits of Wine and Vitriol into a ſolid, by their common Union with the particles of Iron which they have diſſolv'd.

The Corroſion and Stypticity of the Spirit of Vitriol, being very much dulcify'd by the mixture of the Spirit of Wine; for that the parts of the one and the other changing figure and ſcituation, are otherwiſe embody'd and confus'd one within another; and theſe two Spirits thus mix'd having penetration enough to enter into the *Mars*, and to diſſolve a conſiderable quantity of its particles, which perfect the blunting the ſharpneſs of thoſe Spirits, and join themſelves therewith to make up but one body; we muſt believe this Salt to be much more agreeable to the diſpoſition of the ſtomach, and the various juices it may there meet with, then Salt of

Mars

Mars prepar'd with Spirit of Vinegar; conſidering that this Spirit furniſhing the Salt not only with its form, but alſo with its firſt Matter, is that which operates the moſt in it; and that it own Corroſion and Acrimony, not being any-way advantageous to the ſtomach, increaſe the natural Aſtriction of the *Mars*; ſo far it is from rendring it opening as the preparers pretend.

CHAP. LII.

Of Vitriol of Mars.

THE ſavour which is obſerv'd in filings of Steel to be Stiptick, and very like to that of ordinary Vitriol, together with the colour, figure of the parts and other qualities of Vitriol obſerv'd in Vitriol of *Mars*, ſufficiently teſtify the nature of this Artificial preparation, which Authors have very truly call'd by the name of Vitriol of *Mars*. In regard that being only compos'd of the proper ſubſtance of Mars, and the diſtill'd Spirit of ordinary Vitriol, yet there are to be found in it all the marks and qualities of true Vitriol. But becauſe the Spirit of Vitriol made uſe of in the Diſſolution of *Mars*, is aſtrictive and Corroſive, and that this laſt quality cannot but augment that which the *Mars* naturally has, we have no reaſon to believe that the Vitriol which proceeds from it, has of it ſelf any opening faculties, but that being only apt to unite it ſelf to Salt ſubſtances which may ſuperabound in the ſtomach, and to blunt the ſharpneſs thereof by opening the Paſſages, and expelling the ill humours that may follow afterwards, they are only the effects of the force of Nature, when ſhe is freed from thoſe obſtacles, that troubl'd and diſturb'd her Functions. We muſt conſider alſo that this Vitriol is more apt to compreſs and cloſe the fibers of the ſtomach and Inteſtines, and the Orifice and Inſide of the Veſſels through which it paſſes, then to relax or dilate them; though we may ſay that by compreſſing the Veſſels on the one ſide, it may conſtrain them to open on the other, and to give way for the paſſage of the ill humours contain'd therein. All theſe circumſtances oblige us to conſider Vitriol of *Mars*, as a remedy rather Aſtringent, then capable to open obſtructions of the Veſſels, eſpecially thoſe that are inveterate and obſtinate. This obliges me alſo to prefer the Salt of *Mars* laſt mention'd before this Vitriol; or ſome other preparations of *Mars* leſs Aſtringent and ſtiptick then this Vitriol,

But not to eſtrange my ſelf too far from cuſtom, and to ſatisfy others with it the good uſes that may be made thereof, when there is any occaſion to fortify and cleanſe, or to mortify the Acrimony of the Salts, I will afford you the preparation. Put what quantity you pleaſe of the filings of Needles into a glaſs Cucurbit, and having well moiſten'd and imbib'd theſe fillings in good Spirit of Wine, plac'd the Cucurbit over a gentle fire in a Sand-bath, ſtirr'd the filings from time to time with a little Iron-Spatula, and ſuffer'd the Spirit to work for ſome time upon the filings, pour upon them hot water, ſome five or ſix fingers above the filings: then increaſing the heat of the bath, let the ſubſtances ſtand and digeſt for 24 hours, and filter the Liquor through a ſheet of coarſe paper; which after you have put into another glaſs Cucurbit, over the ſame Bath, and evaporated the ſuperfluous moiſture of the liquor to a film, leave the ſediment to cool and Cryſtallize. After which, having pour'd out by Inclination the Liquor that ſwims above the Cryſtals, and alſo ſeparated, dry'd and put up the ſame Cryſtals, evaporate again the moiſture of the Liquor to a film, to get all the Vitriol that remains. You may alſo moiſten the ſediment of the filings with new Vitriol, and leaving the Spirit to operate for ſome time upon the filings, and having pour'd more water upon them as at firſt, reiterate digeſtion, and all the forgoing operations to compaſs the greater quantity of Vitriol of *Mars*.

Some mix the Water with Spirit of Vitriol before they pour it upon the filings. But their diſſolution not being to be effected in a ſmall time but by the Spirit of Vitriol; and this Spirit of Vitriol acting with more force when it is alone, then when weakned by the water, it is much more to the purpoſe to begin the diſſolution of the Steel with that; and repeated experience has often ſhew'd me the good ſucceſs of it, as well

for the beauty as the quantity of the Vitriol which I have had; the addition of water ſerving only to ſoak and ſeparate the parts of the Steel which the Spirit of Vitriol has diſſolv'd, from thoſe which it has not.

You may have a very beautiful Saffron of Mars, by calcining this Vitriol in a Crucible in an open fire, till it be reduc'd into a very fine red powder, which is properly that part of the Steel only which the Spirit of Vitriol has diſſolv'd.

Vitriol of Mars is never giv'n but from three or four to twelve or fifteen grains at moſt, mixing it in proper liquors.

Vitriol of Mars may be alſo diſtill'd through a Retort, obſerving the ſame method as for ordinary Vitriol, and the Spirit drawn off made uſe of for the diſſolution of the Steel. After you have ſo done, you ſhall find at the bottom of the Cornute, the ſubſtance of the Steel in ſomewhat red powder, which will be the true Saffron of Mars.

CHAP. LIII.

Of Tinctures of Mars.

THE hardning and compacting the parts of Iron, when it is turn'd into *Steel*, do not take from it the aptneſs which it has to be penetrated and diſſolv'd, not only by corroding Spirits, and by volatile and fix'd Salts, but alſo by Dew, by Wine, and ordinary water, provided that being in ſmall filings, the liquors are allow'd their due time to penetrate and diſſolve the parts. For though that neither Wine nor Water can totally diſſolve Steel, nor operate upon it with that force and ſpeed as the Spirits and corroding Salts, nevertheleſs they are able to diſſolve a conſiderable quantity of its parts, of which the Steely ſavour taſting of Vitriol, and the brown colour which happens to them are aſſured ſymptoms.

The Water wherewith the filings of Steel are moiſten'd, penetrates the ſuperficies, and converts it into ruſt, which you may afterwards diſſolve in a larger quantity of Water, and change it into a yellow tincture, very ſerviceable. But if you infuſe the filings of Steel in cold weather in White-wine enclining to green, for ſome weeks, putting them both together in a double glaſs Bottle well ſtopp'd, the acid of the Wine united with its volatile Salt, will make a larger diſſolution of the parts of the filings, and colour the Wine very brown, which you may give to good purpoſe from half a ſpoonful to one or two ſpoonfuls in the morning faſting, and continue the uſe of it for many days againſt obſtructions of the Liver, Spleen, and Matrix; or elſe make a Syrup thereof with fine Sugar, to take from half an ounce to one or two ounces at a time. But becauſe it requires a long time to diſſolve Mars in any of theſe menſtruums, we muſt uſe other means, to which purpoſe there is a tincture to be thus prepar'd:

Beat to fine powder two pound of fair Tartar, and having mix'd it with half a pound of filings of fine Needles, put them together into a large Kettle, which muſt be fill'd almoſt quite full of water, and ſetting the Kettle over the fire, make the ſubſtances boil, ſtirring them from time to time, eſpecially at the bottom, to facilitate the diſſolution of the Mars, adding ſtill more water, as the water of the diſſolution boils away. Continue this boiling for ten or twelve hours, or till you perceive that the filings of the Steel are almoſt diſſolv'd in the liquor, which will be of a brown colour when it is filter'd and ſeparated from its ſediment, though the ſediment retain a whitiſh grey colour, which the ſubſtances hold all the while they boil. Then having taken the Kettle from the file, hold it ſideways, that the liquor may filter through languets of Cloth ready provided; which done, leave the ſubſtances to cool for four and twenty hours. Then having moiſten'd and gently preſs'd the languets, dipp'd one half in the liquor, and the other half out, ſo that the water that trickles down the languets may diſtill into an earthen Pipkin, give the liquor time to filter of it ſelf, enclining the Kettle more and more as it empties. This operation is ſomewhat long, and requires two or three days time. But by this means you ſhall have a tincture of Mars very clear, though of a brown red colour, and a ſowre taſte like that of Vitriol. When this tincture is almoſt all filter'd,

having

having wash'd the Kettle, put it in again, and evaporate the superfluous moisture over a very gentle fire, till it be well concenter'd and reduc'd to the consistence of a Syrup somewhat liquid, and when it is cool put it up into a double glass Bottle well stopp'd; it is to be given in the morning fasting, from one dram to two, in proper liquors, continuing the use from time to time as occasion serves.

In the preparation of this tincture we are to observe, that the acid Salts, and those that are purely salt, dissolve Steel with equal force. Observe also, that Mars thus dissolv'd is in a fitter condition to be conveigh'd to the parts that have occasion for it, then that which cannot act unless dissolv'd by the stomach; and that having been dissolv'd by an acid saline Salt, and by consequence of a midling nature, it may be able to remedy more effectually the disorders which the ill humours have produc'd; for this tincture is so much the more able to open the obstructions of the Vessels, by reason of the assistance which it receives from the acid saline Salt of Tartar which has dissolv'd the Mars, and which without diminishing the good qualities which the Mars has to strengthen the parts through which it passes, enforces it to obey its operation, by softning the matters that stop the passages, and by carrying them off by the ordinary ways, and by re-establishing nature and all its functions, to restore that health to the parts which they stood in need of.

You may pour good Spirit of Wine upon the Saffron which remains after the distillation of the Vitriol of Mars, and extract its tincture in a Sand-bath moderately hot; then having filter'd it through a piece of course paper, and drawn off, in *Balneo Mariæ*, about three fourths of the Spirit of Wine, keep the tincture concenter'd, which remains at the bottom of the Cucurbit; the dose of which is from seven or eight to twelve or fifteen drops, in some proper liquor. This tincture is principally commended for the cure of the Dropsie, which comes from the relaxation of the Lymphatick Vessels, which extravasate and spill the serosities over the whole habit of the body. For this tincture closing the orifice of those Vessels, enables them to void the Lymphatick humour by the ordinary ways, not suffering them to overflow the other parts.

You may also dissolve the filings of Steel in very strong Vinegar, and afterward evaporate the greatest part of the moisture of this dissolution, then extract the tincture of it with good Spirit of Wine; afterwards having filter'd and concenter'd it, keep it for the same use as the preceding one. But it must be lookt upon as far more astringent, in regard the natural astriction of the Steel is augmented by that of the Vinegar which dissolv'd it.

Some having put the filings of Steel into an Iron Pan, moist'n it with good Vinegar, and dry it over the fire, stirring it often with an Iron Spatula, repeating these operations several times; then they lay these filings for some days to macerate in good *Spanish* Wine, stirring them from time to time, and having filter'd the liquor, keep it for their use. I omit several other tinctures, the description whereof seems to me altogether unnecessary.

CHAP. LIV.

Of the Extracts of Mars.

ALL the tinctures of Mars may be easily turn'd into Extracts, thick'ning them by degrees over a gentle fire to the consistency of an Extract. But other Extracts of Mars may be also made in manner following: Mix equal parts of Saffron of Mars reverberated with Sulphur and Sal Armoniack in powder, and having put them into a glass Cucurbit, plac'd in a Sand-bath, and cover'd it with its head carefully luted, make sublimation thereof in a gradual fire, and by this means one part of the Saffron of Mars mix'd with the Salt Armoniack, will mount in yellow flowers, which you must grind and mix afterwards with the settlement, repeating five or six times the same sublimation and mixture with the settlement, or so often till the Saffron of Mars be almost all ascended with the Salt Ammoniack in flowers; then having put these flowers into a Matras, and pour'd upon them Spirit of Wine well

well rectify'd, four fingers above the ſubſtances, cover the Matraſs with a Blind-head carefully luted, then ſet it over a Sand-bath over a fire of digeſtion, which muſt be continu'd twelve or fifteen days, ſtirring the Ingredients from time to time to haſten the Extraction. Afterwards the Tincture being colour'd, filter it, and having, if you think good, drawn off the moſt part of the Spirit of Wine by the moſt gentle and ordinary ways, evaporate by degrees the ſuperfluous moiſture to the conſiſtence of an Extract. Which may be taken alone from half a Scruple to a whole one, or mix'd with Opiates, or other opening and purging Medicines.

You may alſo prepare an Extract of *Mars* very plain, by putting into a Matraſs a pound of filings of Needles, and pouring upon them juice of Grapes newly preſs'd forth, and unfermented, about five or ſix fingers above the ſubſtances, then having cover'd the Matraſs with a Blind-head, exactly luted, and plac'd it in a Sand-bath or over a Bakers oven, you muſt ſtir it from time to time, but let it there ſtand for forty days, or till the Grape juice be of a very dark colour. Then having filter'd that Liquor through a courſe piece of paper, and put it into an Earthen pot well glaz'd within, evaporate the ſuperfluous moiſture over a gentle fire, till the Tincture be as thick as an Extract, of which you may make the ſame uſe as of the foregoing. But becauſe as well Extracts as other preparations of Steel are generally accompany'd with the natural Aſtriction of that Metal, it is good to mix them, at leaſt to let them precede or follow ſome purgatives, which may aſſiſt them to open the paſſages.

With much more facility you may prepare an Aſtringent Extract of *Mars* by infuſing the filings of Steel for ſeveral days, and afterwards boiling them in ſtrong Wine ſqueez'd from the Grape-preſs, or elſe in juice of Barberries, or in any other Aſtringent juice, filtring afterward this Liquor, and reducing it by ordinary ways to an Extract, which may be giv'n to good purpoſe from half a Scruple to half a dram, againſt all weakneſſe's, and want of retention in the Stomach and Inteſtines.

CHAP. LV.

Of the Preparation of Copper.

SEveral Writers will have it, that an undigeſted Sulphur, a red Salt, and a yellow Mercury, are the matters that make up the Compoſition of Copper, affirming it however to be a difficult thing, to make a true ſeparation of the Principles of this imperfect Metal, to which they have alſo giv'n the name of *Venus*, by reaſon of its Sympathies with that Planet, and the particular cures, it affords to the parts of Generation.

Sometimes the Filings are calcin'd, or the thin plates of Copper alone, in a Furnace of Reverberation. Sometimes the thin plates are lay'd in Stratification between decrepitated Salt beaten to pouder, in a Crucible or ſome other Veſſel able to withſtand the fire, then quenching theſe thin plates in water, and having cleanſed them well with Iron Bruſhes, they are to be ſtratify'd again, repeating theſe operations three times, by which means you ſhall have a very red Saffron of *Venus*, which it will be ſufficient to waſh well, and keep in fine pouder, for Emplaſters, and other External remedies for the cleanſing of Wounds and Ulcers.

There is another Immerſive Calcination of Copper, by diſſolving it in Aqua-Fortis or in Spirit of Niter, or in ſome other corroding Spirit. Then having drawn off the Aqua-Fortis or other Corroding Spirit by Diſtillation, you ſhall find the Copper at the bottom of the Veſſel in a red pouder, which muſt be waſh'd, dry'd, and kept for uſe. Or elſe you may precipitate the Diſſolution by putting in a thin Plate of Iron, and pouring hot water upon it, which will enforce the Diſſolvant to quit the Copper which it had diſſolv'd, and ſo let it fall to the bottom of the Veſſel in a red pouder, which is to be kept as a true Saffron or precipitate of *Venus*.

You

You may cut into pieces thin plates of Copper, and having ſtratify'd them in a great Crucible with equal parts of Sulphur in pouder and cover'd the Crucible with his cover having a little hole in the middle, lute the jointures round about, and having left the Lute to dry, place the Crucible upon a Culot, and light a wheel fire round about it a diſtance enough to melt the Sulphur, keeping the fire thus for an hour, then put the fire nearer and nearer by degrees till the Sulphur take fire, and that the flame flaſh out of the cover of the Crucible. By this means the Sulphur being conſum'd, and the ſubſtances cool'd, you ſhall find the plates of Copper at the bottom at it were ſwell'd, dark colour'd and brittle as *Aes uſtum*, which you may reduce into pouder, that will be alſo a Saffron of *Venus*, only for outward applications.

There is alſo another Calcination of Copper much leſs violent, and only ſuperficial, by moiſtning the Copper plates with corroding Spirits, or with Salts diſſolv'd in water, by which means you extract a Verdigriſe which appears upon the ſuperficies of the Copper-Plates. You may alſo extract a Verdigriſe by means much more gentle in hot Countries, and particularly at *Montpelier*, by putting a little Wine at the bottom of certain great Earthen pots narrow below, ranging above the Wine upon little Sticks, or pieces of Clay the plates of Copper, and ſtratifying them with the lees of Grape Cluſters, moiſten'd before with the ſame Wine, covering the pots afterwards, and leaving them in a cool place for ſeven or eight days, or till the ſuperficies of the Plates be well cover'd with Verdigriſe; which you muſt ſcrape off with knives; reiterating afterwards the ſame Stratification, and leaving the pots as before to get a greater quantity of Verdigriſe: which ſome call the Flower, others the Vitrioliz'd Salt of Copper, though it be indeed the proper ſubſtance of the Copper diſſolv'd by the volatile acid Saline Spirit of the Lees of the Grape-Cluſters, aſſiſted by the VVine and the ſecret Ferment of the one and the other.

CHAP. LVI.

Of the changing of Copper *and* Verdigriſe *into* Vitriol.

AFter you have plac'd a great Crucible upon a Culot in the midſt of the Hearth-place of a VVind-Furnace, grind to very fine pouder upon Porphury, a pound of Saffron of *Venus*, and having mix'd with it the eighth part of its weight of pouder of Sulphur, put this mixture into the Crucible, round about which kindle a moderate fire of Coles, continuing the fire till the Sulphur be wholly conſum'd; taking care in the mean while to beat over again the ſubſtances, in caſe they clot together in the Crucible, during the operation. After which, the ſubſtances being cold, mix with the ſame Saffron as much Brimſtone pouder'd as before; and having return'd this mixture into the Crucible and kindl'd the fire, do as you did the firſt time, repeating the ſame operations, ten or twelve times, to open the Copper perfectly, and make fit to be diſſolv'd. At length the Saffron being cold, after you have ground it very fine upon Porphury, put it into a glaz'd Pot of Potters-Earth, and ſet it in *Balneo Mariæ* moderately hot, where having firſt moiſten'd it, then ſteep'd it in a good quantity of Rain or River VVater almoſt boiling hot, ſtirring it from time to time; macerate the ſubſtances, continuing ſtill to ſtir them till the water look blew. Then having filterd and put this Tincture into a Glaſs Cucurbit plac'd in a Sand-bath, and having evaporated the ſuperfluous moiſture to the film, when the Ingredients are cold you ſhall find at the bottom of the Cucurbit the Cryſtals of *Venus*, having firſt ſeparated by Inclination and pour'd in to another Cucurbit the Liquor that ſwims above the ſubſtances, which you muſt evaporate and Cryſtallize as before, till the whole be Cryſtalliz'd.

Some may wonder that the Saffron of *Venus* diſſolves ſo eaſily in the VVater, in regard the proper ſubſtance of Copper contain'd in its Saffron, how exactly ſoever it be calcin'd or reverberated does not give way to ſuch a feeble Menſtruum as water

ter. But that will be eaſily manifeſt, when we obſerve that the Acid of the Sulphur having corroded, and in part diſſolv'd ſome particles of the Saffron of *Venus*, during its Calcination, and being in ſome ſort incorporated with it, the water almoſt boiling hot eaſily diſſolves it, and with it the parts of the ſame Saffron half corroded and diſſolv'd before. So that the Vitriol which you draw from thence, is properly compos'd of nothing but the Acid parts of the Sulphur, and thoſe of the Saffron of *Venus*, which the ſame Acid of Sulphur had open'd and diſpos'd to be diſſolv'd with it in the water.

This Vitriol of *Venus* is given from two or three to twelve or fifteen grains in proper Liquors, againſt diſeaſes of the head, ſtomach, and parts of generation; for the cure of which it is often us'd in injections, mixing a dram of it in a pint of juices, decoctions, or diſtill'd waters proper for that purpoſe. It is alſo good to kill Worms.

But becauſe the boiling water cannot diſſolve the whole ſubſtance of the Saffron of *Venus*, put the ſediment into a Glaſs Cucurbit, and pouring diſtill'd Vinegar upon it, about four good fingers above the ſubſtances, make a Maceration thereof in a Sand-bath moderately hot, till the diſtill'd Vinegar look blew; then pour out the Tincture by Inclination, and keep the Tincture in a veſſel apart; after this pour more Vinenar, and repeat the ſame Macerations and Operations till the ſpirit ceaſe to colour. Then having mingl'd all the Tinctures, evaporate and chryſtallize them, as you did before, and dry and keep the Chryſtals.

The Vert-degriſe being much more open and better digeſted then the Saffron of *Venus*, is alſo ſooner and more eaſily diſſolv'd. To which effect having put three or four pound of Vert-degriſe pouder'd into a Glaſs Cucurbit plac'd upon a Sand-bath, temper it by degrees in good ſpirit of Vinegar, ſtirring it with a wodd'n Spatula, and pouring the Wine upon it, till it ſwim above the Verdigreſe five or ſix fingers. Then kindle and keep a moderate fire under the Bath, and let all the ſubſtances macerate, till the Vinegar look of a dark green colour. After which having filter'd and ſet apart this Tincture, pour more ſpirit of Vinegar upon the ſediment of the Vert-degriſe, and repeat Maceration and other Operations till all the pure part of the Vert-degriſe be diſſolv'd in the ſpirit of Vinegar. Then mixing all theſe Tinctures together in a large Glaſs Cucurbit plac'd upon the ſame Bath, kindle a moderate fire underneath, and evaporate by degrees the ſuperfluous moiſture, which will be little elſe but the Flegm of the Vinegar; for its Acid part will incorporate with the Vert-degriſe, and augment its quantity, notwithſtanding the feces that will remain in the Filter, or at the bottom of the Cucurbit, which one would think ſhould diminiſh the quantity of the Chryſtals. Evaporate the moiſture with a very moderate heat, till the film ariſe; after which when the matters are cold, having pour'd by inclination the liquor that ſwims above the Chryſtals into another Cucurbit, and gently dryd and ſet apart the the ſame Chryſtals, replace the Cucurbit in the ſame Bath, and repeat Evaporation and Chryſtallization as often as ſhall be thought requiſite, for the ſaving of all the Chryſtals that ſhall be drawn from that Tincture, that ſhall be of a blew colour.

They that would augment the Acidity of thoſe Chryſtals of Vert-degriſe, with a deſign to draw forth a good ſpirit, fit to diſſolve ſeveral Mineral ſubſtances, diſſolve theſe Chryſtals in new ſpirit of Vinegar, filter the Diſſolution, and having evaporated the ſuperfluous moiſture to the film, they ſeparate the Chryſtals, reiterating the ſame addition of ſpirit of Vinegar, and all the other operations, ſo long, till having coverd the Cucurbit with its head, and evaporating the diſſolutions, the Vinegar diſtill forth, as ſtrong as when in was firſt put in to diſſolve the Chryſtals; and that you may thereby judge that all the pores of the ſubſtance being altogether fill'd with the Acid parts of the ſpirit of Vinegar, it cannot be any more impregnated.

CHAP.

CHAP. LVII.

Of the Distillation of Crystals *of* Venus.

BEfore you undertake to distill the Crystals of Saffrons of Venus, or those which you shall have drawn from Vertdegrise, you must, after you have put them into a glass Cucurbit, pour upon them Spirit of Wine well rectify'd four fingers above the substance. Then having plac'd the Cucurbit in a Sand-bath over a very gentle fire, cover'd it with its head well luted, and fix'd to it a little Recipient luted after the same manner, draw back the spirit of wine, and return twice more other spirit of wine upon the Crystals, to qualifie their Acrimony in some measure. Then having dry'd and beaten them, fill about two thirds of a great glass Retort environ'd with lute, and having plac'd it in a close Furnace of Reverberation, and adapted and carefully luted a grand Recipient to the neck, distill the spirit with an immediate fire gentle at first, then encreas'd by degrees, and from degree to degree, and continuing it till no more vapours rise out of the Cornute; then when the vessels are cold, put the Residence into a new Cornute environ'd with Lute, and having pour'd the distill'd spirit in the Recipient upon it, and plac'd the Retort as before in a close furnace of Reverberation, and fitted and luted a Recipient to the neck, reiterate Distillation, as also Cohobation of the spirit distill'd upon the sediment, and make a third Distillation. By this means you shall have a spirit impregnated with the most essential parts of the Saffron of *Venus*, or of those of *Vert-degrise*, recommended by several good Authors for a specifick against the Epilepsie, Apoplexie, Convulsions, and other maladies of the brain; as also against those of the matrix. They also esteem it highly against the Jaundise, weaknesses of the stomach, and to break the stone in the Reins and Bladder. Against all sorts of Agues, the Pestilence, and that it may be successfully used instead of the Prophylactick water of *Sylvius*, in all diseases for which that is commended. Insomuch that *Paracelsus* avers that this spirit makes the fourth part of an Apothecaries shop. The dose is from five or six to ten or twelve drops, in proper liquors. It is us'd in ointments to make the hair grow, and to cure the Itch, Scurf, and Scald-heads.

But besides all these vertues, they pretend that it is a real *Alkahest*, able to dissolve totally all Pearls, Corals, Crabs-eyes, and other such kind of substances, with much more ease then any other dissolvants, which altering and destroying themselves in some measure, while they act upon the substances that they dissolve, leave great impressions of their Acrimony, and with that the most part of their Acidity. Whereas if you believe them, after this Spirit has dissolv'd all sorts of substances, it quits them altogether, when it is forc'd out by distillation, issuing out with the same strength which it had before distillation, and is still in a capacity to dissolve more, and as often as you can desire. But because the salt part of these substances is sure to retain with it some part of the Acid, with which it may have united it self, and that besides this, the terrestrial part fixes and detains some other particles, which cannot well be separated but by Lotions, it is not to be thought that this spirit is alwaies the same. Nor do I find the use of it very necessary for those dissolutions, because for reasons otherwhere alledg'd the Magisteries of Pearls, Corals and such other kind of substances, are much inferiour, and of less use then the substances themselves ground to a very fine powder upon Porphyry; and that the apparent salt which a man might draw from them causing this spirit to incorporate with the substances which it has dissolved, would prove more sharp then that which should be drawn from the same substances with Vinegar distill'd, and the Acid Salt would be also incorporated with the substance which it has dissolv'd. We should deceive our selves also to let Copper, Iron, Pearls, Corals, *&c.* pass for pure *Alkali's*, upon this ground that Acid spirits act upon them. For though these substances are not destitute of their proper Alkali, it follows not that this part is the whole, nor that it can transform the other parts into it self, since that when the Acid spirits dissolve those sorts of substances, they do it not by uniting themselves to them, as they do with the true Alkali's, but by destroying them by the division which they make of their parts; quitting them, and suffering them to precipitate downward, when they meet

any fix'd or volatile Salt with which they may unite, conſidering that only ſalt ſubſtances diſſolvable in water, and capable to unite and incorporate themſelves with the oils, which can be accompted real *Alkali*'s. For though the boiling water, as I have ſaid, may make ſome diſſolution of Copper reduc'd into Saffron, after it has been calcin'd with ſulphur, nevertheleſs it can only diſſolve that part which the Acid of the ſulfur has corroded and half diſſolv'd during Calcination.

Some have pretended to draw forth a ſulphur of *Venus*, by mixing its Vitriol with half its weight of filings of Steel, moiſtening them ſeveral times with Vinegar diſtill'd, drying them full as many times, and at length reducing them into a red maſs, over a gradual fire augmented toward the end. After which they bruiſe the Maſs in a Mortar, and extract the Tincture by the uſual waies with Vinegar diſtill'd, which they afterwards evaporate to the half part; then pouring upon it liquor of Tartar, they precipitate a ſubſtance which they call by the name of Sulphur of *Venus*; though indeed it be nothing elſe but the proper ſubſtance of the Copper, which lay hid in its Vitriol, and that portion of filings of Steel, which the diſtill'd Vinegar had diſſolv'd, when it was us'd for the extract of the Tincture. But this preparation, in my opinion, having more of vanity then profit, I think it to no more purpoſe to dilate any more upon it. No more to purpoſe do I think it to multiply any more preparations of Copper, believing that if thoſe which I have given will not ſatisfie, to all intents the curious may have, they may find by their own progreſſes, or by the ſeveral preparations which I have given upon *Mars*, whatever is neceſſary to be practis'd upon Copper.

CHAP. LVIII.

Of Preparations of Lead.

LEAD is not only put into the laſt rank of imperfect Metals, but has been alwaies accompted the courſeſt, moſt terreſtrial, coldeſt, ſofteſt, and moſt eaſie to melt of all Metals. It is thought to be compos'd of a terreſtrial Salt and Sulphur, and an imperfect Mercury, ſomewhat of the nature of Antimony. It is call'd *Saturn*, from the influence which that planet has over. Particular qualities are aſcrib'd to it alſo, for the cure of diſeaſes of the Spleen, and Head, becauſe there is alwaies ſome portion of Silver mix'd with it in the Mine. Its Terreſtrious Salt and Sulphur are the reaſon, that being melted, it mixes it ſelf with all Metals, and that being expos'd with them to the violence of the fire, it reduces all imperfect Metals into droſs and ſcum. The ſame Sulphur is the reaſon that being reduc'd into Lime and pouder'd, it eaſily unites with all ſorts of unctuous matters. For which reaſon it is often made uſe of in ointments and emplaſters, with which it incorporates very well. The imperfectneſs of its ſubſtance hinders however, but that both Pharmacies make ſeveral preparations of it, and that it is more us'd than all the other Metals together.

The meaneſt and moſt ſimple preparation of Lead is that of its purifying. To which purpoſe, having melted it in a convenient Earthen Pot, or in ſome great Iron Ladle, and thrown upon it ſome pieces of Suet or Wax, let them flame together, and the flame being paſs'd, ſcum off the impurities. You may alſo keep it a longer time over the fire, and throw in more pieces of Suet or Wax, and ſtill ſeparate the ſcum that riſes; but all the Lead would turn into ſcum, ſhould you continue to hold it over the fire, burning more Suet or Wax upon it. And therefore once burning, and once ſcumming is enough, and then to pour it into ſome veſſel half full of hot water, to have your Lead ſufficiently pure, and fit for any other preparations which you intend.

Having thus purifi'd your Lead, if you would calcine it into a grey Calx, you may keep it over a moderate fire in the ſame veſſel, ſtirring it continually with a long Iron Spatula, and ſeparating from time to time the grey Powder enclining to yellow, which will gather together; ſtill keeping it upon the fire, and ſeparating the Powder till the Lead be changed into that kind of Calx or Lime.

Afterwards quench this Calx in ſome flat Earthen *Capſula*, and placing it in a proper

per Furnace of Reverberation, kindle and keep a moderate fire, not to melt the Lime, which must be left to reverberate for some hours, till it becomes yellow, which the Painters call *Macicot*; or of an orange colour, enclining to red, which they call *Minium*.

You may also reduce the Lead into thin Plates, and having hung them up, let them receive the vapours of Vinegar put into a proper vessel over a moderate fire, and afterwards separate the white substance that will gather together, which is that which they call *Ceruse*. Or else melt the Lead in a Crucible, and having mingled with it the half of its weight in pouder'd Brimstone, leave it upon the fire, till the Brimstone be all consum'd, at what time you shall find the Lead in a dark colour'd Powder, which is cnll'd *Burnt Lead*.

I leave apart the Calcination of Lead in Lytharge, which is done in purifying the perfect Metals, and the immersive Calcinations of Lead in corroding spirits; of which that which is done with spirit of Vinegar in preparing Salt of *Saturn*, may serve for a sufficient example.

I will only tell you my thoughts upon the augmentation of weight to the eleventh part, which happens to Calx of Lead, and other Metals or Metallick substances, which have been long expos'd to the Action of the fire; that is to say, that so long as the violence of the flame opens and divides the parts, the Acid of the woods or other substances that burn, insinuates it self into the pores of these Limes, where it is stopp'd by the secret *Alkali*, which it there meets with. So that as long as the pores into which it is entr'd, keep themselves open, it remains there conceal'd, like the Acid and Volatile Salt of Woods in the soot of the Chimneys; and making but one body with the *Calx*, the weight of it is manifestly augmented for a time. But if you melt the Calx's, and cause them to resume their natural Metallick body, the closure of the pores of the Metal, drives out the forraign Acid; so that finding it self only compos'd of its proper parts, it weighs no more then it did before it was reduc'd into a *Calx*. And though the Calx of Lead in some measure does the office of *Alkali*, by contracting a kind of union with the Acids; and that it cannot be deny'd but that Lead has its secret *Alkali*, like all other Metals and Metallick substances, yet we should do ill to take the whole for that part; and to look upon the whole substance of Lead as a true, pure and simple *Alkali*. For if it were so, it would not only suck up much more Acid, but having once suckt it up, it would make but one body with it, and would not be separated from it, as it is, by Fusion, which it would endure as the Acids united with the true *Alkali*'s do, without any division of their substance.

CHAP. LIX.

Of Salt and Magistery of Saturn.

YOU may indifferently make use of for these Preparations either of Lytharge, Minium, Ceruse, or the other Calx's of Lead. Because it is sufficient to have a Lead that is open, and in a condition to be easily dissolv'd by Vinegar distill'd. But because this Metal calcin'd to whiteness, comes neareſt to the colour of Salt, it is better to make use of Ceruse, or some other white of Lead. But you must be sure to chuse a true Ceruse of Lead, such as we call *Venetian* Ceruse, and not the counterfeit Ceruses, which being mingl'd with Chalk, or other alien substances, have neither the brittleness, weight nor whiteness of that of *Venice*.

Put then into a Cucurbit of Glass or Potters Earth, what quantity of Ceruse you please, and having set it in a Sand-bath, and pourd distill'd Vinegar upon it, five or six fingers above the substances, kindle a fire under the Bath, stirring the Ingredients with a long woodden Spatula, as well to hinder the Ceruse from lying in a heap at the bottom of the Vessel, as to hasten the dissolution. Continue the fire very moderate, till the distill'd Vinegar be become very sweet, which is a sign that it has dissolv'd a good part of the Ceruse. At which time, after you have cool'd the Bath, pour'd out by Inclination, and filter'd the Liquor, keep it apart in a double Glass-

Bottle; which done, return the Cucurbit again upon the Bath, pour freſh diſtill'd Vinegar upon the ſediment of the Ceruſe, and kindling the fire under the Bath, repeat the ſame maceration and other operations, till the pure ſubſtance of the Ceruſe be almoſt quite diſſolv'd in the diſtill'd Vinegar; then having put all the filter'd diſſolutions into a clear glaſs Cucurbit, and ſet it upon a Sand-bath over a moderate heat, evaporate by degrees the ſuperfluous moiſture, till there remain not above a fourth part of the tincture. At which time, having re-filter'd this liquor hot, leave it four and twenty hours in a cool place, where a good part of it will coagulate into white Cryſtals, long and gliſtering, which will be cover'd with one part of the liquor, not able to cryſtallize it ſelf, by reaſon of its ſuperfluous moiſture. Pour that liquor into the Cucurbit by inclination, and having evaporated in the ſame Bath about half of the moiſture, cryſtallize it again, repeating the ſame operation till all the Salt of Vinegar, incorporated with the ſubſtance of the Lead, be cryſtalliz'd. Then dry the Cryſtals, and keep them for your uſe.

The great ſweetneſs of the Salt of Saturn, is the reaſon that ſome have taken it for a Salt of Lead; though indeed it be no other then a real Salt of Vinegar incorporated with the proper ſubſtance of the Lead, which the Spirit of Vinegar has diſſolv'd; of which you will be ſatisfi'd, when having diſtill'd this Salt of Saturn through a Retort, the ſalt part of the Vinegar being exhal'd in Spirit, you ſhall find in the Retort the proper ſubſtance of the Lead, which was conceal'd in that Salt, reincorporated and become again a real Lead. You may be alſo farther convinc'd, by putting this Salt of Saturn with Salt of Tartar into a Crucible, and ſetting them in a melting fire; for the acid of the Spirit of Vinegar quitting the Lead, to unite with the Salt of Tartar, the ſame Lead rebecomes what it was before it was diſſolv'd by the Spirit of Vinegar, and reduc'd into Ceruſe or Calx.

As for the ſweet ſavour of the Salt, there is as little reaſon to attribute it to the internal Salt of Lead; for beſides that it cannot be ſeparated from the other parts of the Lead, and that this Metal has no ſweetneſs in it ſelf, nor any other conſiderable ſavour; the ſame thing is to be concluded of the Salts of Pearls, Coral, *&c.* Since that after they are diſſolv'd in diſtill'd Vinegar, and the diſſolution reduc'd to Salt, this Salt, which is alſo the Salt of the Spirit of Vinegar, incorporated with the ſubſtance of the Pearls, Coral, *&c.* which the ſame Spirit of Vinegar has diſſolv'd, has a ſweet ſavour very like to that of Salt of Saturn; though it may be averr'd, that this ſweet ſavour does not proceed from any ſeparable Salt which thoſe ſubſtances may have; in regard that after precipitation of thoſe diſſolv'd ſubſtances, or diſtillation of thoſe Salts, you ſhall find very near the ſame weight which they had before the Spirit of Vinegar had diſſolv'd them, and that after you have waſh'd and cleans'd them from all mixture of the Spirit of Vinegar, you ſhall find them as inſipid as they were before; ſo far ſhall you be from perceiving any ſweetneſs in them, no more then in Lead. So that we cannot rationally attribute this ſweet ſavour of the Salt of Saturn but only to the action of the Spirit of Vinegar upon the Lead; nor look upon the ſweetneſs of Salt of Pearls or Coral, but as an effect of the action of the Vinegar upon thoſe ſubſtances, and of its union with them, by means of which action the ſharpneſs of the Spirit of Vinegar being carry'd off, they leave a more ſweet and ſoft impreſſion upon the tongue then they did before.

Lead not being able to act, like the Salts, upon the Spirit of Vinegar, and this latter being the only agent in the diſſolution of the Calx of Lead, we obſerve there much leſs ebullition, and much leſs heat, then in the union of acids with real Alkali's, where every one does its own proper endeavour, and haſtens to contract an union, which is very natural to them, ebullition and heat being the effects of their reciprocal motion. We alſo ſee that this ebullition and fervour ceaſe, when after their union is perfected, their action and motion alſo ceaſe. But here can happen no other heat or ebullition, then what the Spirit of Vinegar only raiſes by its operation upon the Calx of Lime; upon which alſo the Spirit of Vinegar works but very gently, becauſe that being uſually very much impregnated with flegm, its points are more ſlender, and leſs capable of action and motion.

They who are affraid of the coldneſs of Lead, and the acrimony of the Spirit of Vinegar, may pour upon the Salt of Saturn, Spirit of Wine well rectify'd four fingers high, and having caus'd digeſtion for three or four days, draw it off again, then dry the Salt and keep it.

Salt of Saturn is highly commended to quench the internal inflammations and heats

heats of Fevers; as also to temper venereal desires, giving it in proper liquors from three or four, to five or six grains. It is also very much esteem'd for the dissolving hard and schirrous tumors, and to dissipate contusions. It is made use of with success in Collyriums, as well to stop fluxes, as to cool inflammations of the eyes, and consume the Pin and Web at the beginning, dissolving it from one scruple to two, in five or six ounces of Celandine or Eyebright water; of which you may augment the quantity, if you desire a more temperate Collyrium. It is also very useful in injections for Gonorrhæas, Inflammations, and Ulcers of the Bladder, Matrix, and their passages. It is also serviceable in Gargarisms, for the most part of diseases of the mouth, caus'd by volatile or fix'd Alkali's; for the acid of the Spirit of Vinegar, assisted by the cold quality of the Lead, sensibly mortifies the working of these Salts, and extinguishes the inflammation which they cause. Which is so much the more conformable to reason, in regard we find by experience, that Sal Prunella, Spirit of *S*alt, *S*ulphur, and Vitriol, and all sorts of acids, even to simple Vinegar, are very good for these sorts of distempers; which would be the worse by the use of all other *S*alts, as well fix'd as volatile.

There is a Liniment to be made call'd the Liniment of Saturn, by stirring together equal parts of the dissolution of Calx of Lead, and Oil of Roses, and reducing it to a kind of *Unguentum Nutritum*, which is very proper for the cure of malignant Ulcers that proceed from a sharp and salt humour; as also for Tetters, Scabs, Ring-worms, and Burns.

There is no need of any particular dissolution of Calx of Lead to make a Magistery of Saturn; it being enough to put into a Cucurbit, or a large glass Pan, as much as you think convenient of the filter'd liquor of Saturn, prepar'd for extraction of the Salt, and to pour upon it softly liquor of Tartar, till the ebullition cease. For the liquor of Tartar uniting it self with the Spirit of Vinegar which had dissolv'd the Calx of Lead, will cause it to quit the Calx, and suffer it to precipitate to the bottom. After which, letting the precipitated substance settle, and having pour'd out the liquor that swims above by inclination, wash the settlement several times with very fair water, till it be dulcify'd, then dry the Magistery, and keep it for use.

This Magistery, to speak properly, is nothing but a Calx of Lead purify'd and subtilliz'd, which is useful in cooling and drying external medicines. Some there are that mix it in Pomatums. But the seeming whiteness which these Pomatums seem to impart to the Skin, is often attended with a colour inclining to that of Lead, and leaves a tincture of the first matter whence the Magistery was drawn, and into which you may change the Salt of Saturn.

You may also make a Magistery of *Saturn*, by weakning the Spirit of Vinegar impregnated with the Lime of Lead, which with a great quantity of VVater which you might pour upon it, and would force it to quit and precipitate to the bottom the Lime of Lead which it had dissolv'd.

Some having dissolv'd thin plates of Lead in *Aqua-Fortis* made with Niter and Alum, pour upon this dissolution Salt water filter'd, and pecipitate a Magistery extraordinary white, which they dulcify by several Lotions, dry in the shade between two papers, and keep for a Cosmetick.

CHAP. LX.

Of the Distillation of Lead.

THE softness of Lead does not renderit more proper then other Metals, to afford by distillation different liquid substances, like several Salts and the parts of Animals and Vegetables. For though by keeping Lead a good while over the fire, you may cause it to evaporate into that which some Writers have call'd *Gas*. However neither by distillation or otherwise can you extract out of it any Spirit of Salt or true Oil, whatever men may promise to themselves. Which Impossibility obliges Authors to have recourse to Corroding Spirits, and to reduce by their means

means the Lead into Lime, that by the Union of this Lime with the Spirits, they may extract a Compoſition much reſembling Salt; and afterwards from this Salt, by diſtillation, a flegm, Spirit, and manifeſt Oil, of which I will ſhew you the preparation.

The better to bring to paſs diſtillation of the Salt of *Saturn*, it is good to have it diſſolv'd ſeveral times in diſtill'd vinegar, and to have drawn off every time the watry part in *Balneo Mariæ*, and to have repeated theſe Operations, till the ſpirit of vinegar diſtill off as acid as it was put in. Whereby you ſhall underſtand that the pores of the ſubſtance of the lead are perfectly fill'd with acid. Then put two or three pound of ſalt of *Saturn* well dry'd into a large Glaſs-Retort: and having plac'd it, and well environ'd it with ſand in a Capſula of proper earth; fitted a Recipient to the beak, and carefully luted the cloſures, begin your diſtillation with a gradual fire, ſoft at the beginning but very fierce toward the end, till no more vapours come out of the Cornute. The Diſtillation being done, and the Veſſels cold and unluted, you ſhall find the flegm and the Spirits of Salt of *Saturn* mix'd in the Recipient, which you muſt put together into a Glaſs Cucurbit, and having plac'd it in a Sand-bath, and cover'd it with its head exactly luted, with a little Recipient fitted and luted to it alſo, make a rectification of the Ingredients over a very ſoft fire. And by this means, after you have caus'd the Combuſtible Spirit to aſcend in the firſt place, which is call'd the Ardent Spirit of *Saturn*, though it be only the volatile Sulphury part of the Vinegar; and have after that drawn off the flegm, you ſhall find at the bottom of the Cucurbit a Purpliſh Liquor, which is improperly call'd by the name of Oil of *Saturn*,, being only the Spirit of Vinegar concenter'd, which has retain'd with it but very few of the particles of the Lead; as will be evident by melting the Maſs that remains in the Cucurbit. For that will turn to Lead altogether like that which was turn'd into Lime for the preparation of the Salt of *Saturn*.

I have ſaid in another place, that when Wine is turn'd into Vinegar, the acid part which then predominates does not deſtroy the volatile Sulphury part of the Wine, but that it there remains conceal'd notwithſtanding the contrary opinion of many. The ſame reaſons fortify'd by that which happens here, ſhews us, that the Combuſtible Spirit that comes forth in this Diſtillation, is nothing but the Spirit of Wine that lay conceal'd and as it were envelopp'd in the acid of the Vinegar, which appear'd, when being forc'd by the fire, a good part of the Spirit of Vinegar which had fix'd it, comes to be ſtopp'd in the pores of the calx of Lead which it had diſſolv'd. It happens alſo after the ſeparation of this Sulphury Spirit, that that which remains at the bottom of the Cucurbit, and is call'd Oil of *Saturn*, has not the ſame Acidity which a pure Spirit of Vinegar concenter'd might have.

However at *Paris* it is a difficult thing, in the Diſtillation of Salt of *Saturn*, to ſeparate from it a true Inflammable Spirit, becauſe the Vinegars are counterfeited, and are compounded with water, which is frequently their foundation. Yet we never fail to ſeparate one, when the Vinegar is pure and only made of Wine. This Salt of *Saturn* made with good Wine-Vinegar never fails to take fire and flame, when it is held to the fire.

VVriters do hold, that the Combuſtible Spirit which is drawn from this Salt is an excellent Diaphoretick, and that it may be ſucceſsfully adminiſter'd in Malignant Fevers; in Venereal diſtempers, and thoſe of the Brain, given in proper liquors from five or ſix to fifteen or twenty drops. The liquor that remains in the Cucurbit is good to cure and cicatrize Wounds and Ulcers, being ſlightly anointed with it. Others eſteem it very much for the diſeaſes that happ'n to Horſes Eyes.

CHAP.

CHAP. LXI.

Of Balſoms *of* Saturn.

SO eaſie a thing it is to diſſolve and incorporate over the fire the powder'd Calx of Lead with Oils, and all ſorts of fat ſubſtances, that it is thence adjudg'd, that having diſſolv'd theſe Limes in corroſive Spirits, and having reduc'd them afterwards into Salts, it is yet more eaſie to diſſolve them in all ſorts of liquors, and to uſe them in all ſorts of Remedies both internal and external.

The Balſoms of Saturn are not the meaneſt remedies to be this way prepar'd. To which purpoſe ſo preſcribe, to put into a glaſs Cornute eight ounces of Salt of Saturn, and to pour upon it twice as much the weight of Ethereal Spirit of Turpentine, and having well mix'd them, to diſtill them in a Sand-bath with a gradual fire; by which means you ſhall draw forth in the firſt place a clear Spirit, very proper for the cure of virulent Gonorrhæa's, eſpecially if you mix therewith a little Camphire; after that an Oil, which is the Balſom of Saturn, very proper for the cure of malignant and canker'd Ulcers.

Others direct you to put four ounces of Salt of Saturn into a Matras, with double its weight of Ethereal Spirit of Turpentine, and having cover'd the Matras with a ſmall blind head, to let them digeſt in a Sand-bath over a very gentle fire, ſtirring them from time to time, and to continue the digeſtion till the Salt of Saturn be very near diſſolv'd, and the Spirit well colour'd. Afterwards, having unluted the Veſſels, and added an ounce of powder'd Camphire, to relute the Veſſels, and continue digeſtion till the Camphire be diſſolv'd, and then to filter this Balſom through a piece of Cotton put at the bottom of a large Tunnel, and then to put it up in a double glaſs Bottle well ſtopp'd, as an unparallell'd remedy to cure all Fiſtula's, Wounds, and Ulcers, of what nature ſoever they were, being apply'd hot to the parts affected. Some make uſe of the ſecond or third diſtill'd Oil of Turpentine inſtead of the Ethereal Spirit, that the Balſom being of a thicker conſiſtence, may ſtick longer upon the parts. Others make uſe of the diſtill'd Oil of Juniper-Berries; believing that beſides the vertues which this will have common with the other Balſoms of Saturn, that it will prove alſo Diuretick, and proper to reſiſt the malignity of Wounds and Ulcers. I omit the Tinctures and Oils which may be made of Salt of Saturn with Spirit of Wine or other Menſtruums, by means whereof, after long and often reiterated circulations and abſtractions, an odoriferous Oil may be at length obtain'd. Nor will I inſert the way of drawing Mercury out of Lead, believing that a man may more profitably employ his time upon other operations more neceſſary.

CHAP. LXII.

Of the Preparation of Tin.

THough Tin be rank'd in the third Claſſis of imperfect Metals, as well as Lead, it is nevertheleſs more pure then the latter. For it is much whiter then Lead; whence it is alſo call'd White-Lead. It is alſo more hard, and more uſeful to make divers ſorts of Veſſels, as alſo more pure, and has leſs droſs in it. And it has this particular to it, that it imparts nothing of ill to the Waters or Liquors, provided they be not corroſive. Tin is thought to be compos'd of impure Earth and Sulphur, ſome Metallick Salt, and a Mercury or Quick-ſilver, much more pure and digeſted then that of Lead, but much inferior to that of Gold or Silver. It is call'd by the name of Jupiter, out of a belief that that Planet communicates his influences to it. And it is alſo thought that the vertues of it are peculiar to the Liver and Matrix.

The

The great aptneſs which Tin has to melt in the fire, and to mix with other Metals is the reaſon that being once melted with them, eſpecially with the Imperfect ones, it is a very difficult thing to ſeparate them totally. And therefore the beſt Method that can be obſerv'd to have it pure, is in the firſt place to have it out of a good mine, then to melt it in ſome great Iron-Ladle, and to burn over it ſome pieces of Tallow or wax, as over Lead; and to ſeparate the thick matter that ſwims above like Scum. This great aptneſs however which Tin has to melt, hinders not but that the hardneſs and enterlacing of the Branchy part of its ſubſtance, make it more difficult then lead, to be reduc'd to a perfect Calx. And therefore it is not enough to melt it, and ſtir it over the fire with a long Iron rod, till it has taken the form of a Lime; but you muſt afterwards reverberate that Lime in a proper Furnace, moiſtning it from time to time with Vinegar diſtill'd, if you would make it fit to be penetrated and diſſolv'd by the ſame Spirit for the preparation of Salt of *Jupiter* afterwards, with the ſame eaſe as you prepare that of *Saturn*, when it is reduc'd into Lime. But this Salt ſo diſtill'd being only compos'd of the Salt of Vinegar diſtill'd, and of the proper ſubſtance of the Tin, diſſolv'd and conceal'd in the ſame Salt; it is better to put it into a Glaſs Cucurbit, and to pour upon it Spirit of Wine well rectify'd. After which having plac'd the Cucurbit in a Sand-bath over a gentle fire, and having cover'd it with its head, and fitted a ſmall Recipient to it, with all the jointures well luted, draw off this Spirit. Afterwards pouring more Spirit upon the Salt, repeat three times the ſame affuſions and abſtractions to make the Salt more fit to be given inwardly from two or three to five or ſix grains, mix'd with ſome conſerve in Hyſterick diſeaſes, eſpecially in ſuffocations of the Matrix. For which reaſon it may be alſo apply'd to the Navil, incorporating it with oil of Rhue. It may alſo ſerve for the cure of Fiſtula's, and old Malignant and Corroding Ulcers, applying it, mix'd with proper Liniments. You may alſo, after you have diſſolv'd the Calx of Tin in Vinegar precipitate the Diſſolution with Salt of Urine diſſolv'd in Water, and having well waſh'd the Magiſtery, uſe it for the ſame uſes as the Salt, and mix it with Pomatums prepar'd to beautify the face.

CHAP. LXIII.

Of the Flowers of Tin, *and the Preparations of the ſame Flowers.*

THE length of time and trouble which is taken up in the Calcining of Tin by the ways which I have ſet down, though the moſt plain and ordinary ways, have enforc'd Artiſts to ſeek for methods more eaſy and more advantagious; wherein ſome have ſpent their time with good ſucceſs. Among other preparations which they have invented, the ſublimation of Tin in Flowers ſeems to me to be one of the beſt. For though they have not undertaken to make the Tin aſcend in Flowers without any mixture, and though fault may be found with the addition of the Salts which they make uſe of to accompliſh their aims, the corroſion of which is to be fear'd: the impoſſibility however to make Tin aſcend in Flowers without their Aſſiſtance, and the facility of ſeparating theſe Salts from the Tin by reiterated Lotions, conſtrain us to approve the uſe thereof, provided that having regard to the weight of the Tin, and how unapt it is to riſe in Flowers, you augment the quantity of the Salts proportionably, of which you are to make uſe.

Thus inſtead of taking equal quantites of Tin and Salt Ammoniack as ſome would do, take eight ounces of the firſt or ſecond Calx of Tin, and four times the weight of Salt-Ammoniack, and having beaten them to a very fine powder, and mix'd them well, ſet a good Aludel upon a proper Furnace cover'd with three or four of its pots one upon another, and having well luted, the cloſures, and cover'd the uppermoſt with a little head, kindle a little coal fire under the Aludel, and increaſe it by degrees, till the

Aludel

Aludel be red hot in all the lower part. At which time throw in at the hole about half an ounce of the pouder, closing the hole immediately, and by this means the Tin and the Salt Ammoniack will rise together in vapours, which will condense in Flowers within side of the Pots. Then throw in another like quantity of Pouder stopping the hole, and leaving the vapours to rise in Flowers, and incorporate, repeating the same operation till all the pouder be spent and keeping a good fire under the Aludal to facilitate the sublimation of the Tin, which by this means will be all sublimated. Whereas if you should put in only equal parts of Tin and Sal-Ammoniack, the Tin would remain almost all at the bottom of the Aludel: which is not to be wonder'd at, since it is impossible to make Metals ascend in Flowers, without the assistance of three or four times as much the weight of volatile Salts mix'd with them, or at least without those several consequent cohobations directed to be made use of.

The sublimation being ended, and the Vessels being cold and unluted, scrape off the Flowers from the pots; and putting them into a great earthen pot full of clean Water, leave the whole thus for four and twenty hours; at the end whereof having pour'd out the Water by inclination, you shall find at the bottom of the Vessel the Calx of Tin in form of a Magistery, and having well sweeten'd it by a sufficient number of Lotions, and dry'd it in the shade, keep it as it is, and give it alone or mix'd with other remedies. Not but that you may reduce it into Salt, by dissolving it in Vinegar distill'd, and observing the same method as for the preparation of Salt of Saturn.

You may also instead of Salt Ammoniack, mix with the Calx of Tin three times the weight of Salt of Niter in powder, and fulminate and sublimate them both together in an Aludel cover'd with its pots and a little head, projecting the powder into the Aludel red-hot, observing the same method as for the preceding flowers. Or to do better, pour upon them good Spirit of Wine rectified, two good fingers breadth above the substances, let it burn there, and reiterate the same operation three or four times before you make use of the flowers.

CHAP. LXIV.

Of the Distillation of Tin.

THE impossibility of distilling or making any liquor ascend from Tin, as well as from other Metals when they are alone; and the earnest desire Artists have had to open its substance, and make it fit to impart its vertues, have enforc'd them to mix matters fit to penetrate, dissolve, and cause the substances to distill. To this effect, having mix'd the Calx or filings of Tin, with double its weight of corrosive Mercury sublimate, put them together in a small glass Cornute, environ'd with lute, and having plac'd it in a small Furnace of close Reverberation, and slightly fitted a half Ball to the beak, begin your distillation with an immediate soft fire, which continue till the liquor like Butter cease to distill. At what time, having chang'd the Recipient, increase the fire by degrees, and force it at length, till all the Mercury in the sublimate be reviv'd and dropp'd into the Recipient. Then pouring fair water upon the white and thick water in the first Recipient, & having precipitated by that means the substance of the Tin which the Corrosive Salts of the sublimate had corroded and dissolv'd, leave the matter precipitated to settle, till it be exactly dulcify'd. Then having dry'd it in the shade, keep it for use, giving it from two or three to five or six grains, for the same distempers, that the other preparations of Tin are prescrib'd for.

We should do ill to think that this precipitation proceeds from the *Mercury* which is the principal ground of the sublimate Corrosive; since experience tells us that all the *Mercury* that could be in the sublimate, descends into the Recipient after the distillation of the Butter, if the fire be forc'd, and that you may if you please reduce this precipitate into Tin, such as it was before the Corrosive Salts of the sublimate had dissolv'd it.

You may filter and evaporate in part the firſt Lotion of this precipitate, to have an acid Spirit, not much unlike to that which is drawn from the firſt Lotion of the Butter of Antimony, which is call'd Philoſophick Vitriol; or elſe Cryſtallize this Lotion into Salt, by continuing to evaporate it to the film, or ſpread it, leaving it to cool, and ſeparating and drying the Cryſtals afterward.

There is alſo a Butter or Glacial or Icy oil of Tin to be prepar'd, of which there is a preparation to be made, call'd Bezoar of *Jupiter*, after this manner.

Melt in a Crucible three ounces of Regulus of *Antimony*, with two ounces of pure Tin, then having pour'd this mixture into the Inſtrument call'd the Iron horn, heated and greas'd within, beat it to fine pouder, then having mingl'd this pouder with double it's weight of Corroſive ſublimate, and put the whole into a little Glaſs Retort daub'd over with Lute, draw off as well the Butter as the *Mercury*, as you did before; precipitate alſo the diſtill'd Butter in the ſame manner, & waſh the precipitated matter alſo in the ſame manner. After which you may if you pleaſe keep ſome part of the pouder for your uſe, to purge gently upwards and downwards in Hyſterick Maladies, giving it from two to four or five grains in ſome Conſerve or Confection. But to have the Bezoar of *Jupiter*, having weigh'd and put the Pouder into a ſmall Cucurbit of Glaſs, and pour'd upon it three times the weight of good Spirit of Niter, place it in a Sand-bath over a moderate fire, cauſing the Spirit of Niter to evaporate gently, till the Maſs be altogether dry: then having pouder'd this Maſs, and dulcify'd it very well, with ſeveral Lotions, dry it and keep it in a double glaſs bottle well ſtopp'd.

This Bezoar of *Jupiter* is one of the beſt preparations that can be made of Tin. For beſides that it is a ſpecifick remedy againſt all diſeaſes of the Matrix, it is alſo a Sudorifick and very proper in Malignant, and in Venereal diſtempers, when you would force out the Malignity by ſweat. It is given in Bolus between Meals in ſome Conſerve or Sweet-meat from five or ſix to twelve, fifteen, or twenty grains.

I omit ſome other preparations of Steel which you may find in other books, believing that I have ſhew'd you all that can extract from this Metal whatever good vertues it has in Phyſick.

CHAP. LXV.

Of the Preparation of Mercury.

QUick-ſilver is not rank'd among the number of Metals. But it is call'd by the name of a half Metal; becauſe that being neither hard nor Malleable like the true Metals, it mixes eaſily with all, and eſpecially to Gold, to which it ſerves as an Intermedium to join it with other Metals. It's Silver colour, and its nature apt to run, have caus'd it to be call'd Quick-ſilver. As its colour and fluidneſs have given it the name of *Hydrargyrum*, or Watry Silver, or water of Silver. It is call'd *Mercury*, by reaſon of the Analogy which it has to that Planet, or to its aptneſs to change its figure, a property attributed by the Heathens to *Mercury* one of their falſe Gods. For which reaſon and for the diverſity of colours which you may give it, it is alſo call'd *Proteus*. And ſome for its fluidneſs and volatility have call'd it the *Fugitive Servant*.

Quick-ſilver then is a Mineral or Metallick Liquor, of a volatile nature, found in Mines, and compos'd as ſome believe of a white Sulphury Earth, and its own proper internal *Mercury*, which the Philoſophers think to be one of its Principles, and which lyes conceal'd, as well as its Salt and Sulphur. Quick-ſilver is found in the Mines of *Germany*, *Spain*, and the *Indies*; where it ſometimes flowers alone in its own proper Mine, or in thoſe of other Metals; but moſt frequently mix'd among Earths, Stones, and incorporated with natural Cinnabar, whence it is ſeparated by means of the fire.

The weight of Quickſilver is not much different from that of Gold. But its ſubſtance is ſo volatile, and ſo eaſy to be penetrated, and divided into ſuch ſmall parts;

parts, that it is no wonder it ſo eaſily receives the impreſſion of the ſubſtances it meets withall; eſpecially of Salts, Sulphurs, and Spirits, and that it ſubmits for the moſt part to their action, but always to that of the fire. And though we cannot ſay, that Quick-ſilver is without its proper Alkali, unleſs we deny its principles, this Alkali making but one part of its compoſition, and being inſeparable from its other parts, we ſhould do ill to take this half Metal for a pure Alkali, as being it ſelf ſubject to the operation of Alkali's, more then to that of Acids and Sulphurs; and for that the ſtrongeſt Acids work but very ſlowly upon it, and without any effervеſcency, as we obſerve in its diſſolution by Spirit of Vitriol; and that its being ſo eaſily diſſolv'd by Aqua Fortis and Spirit of Niter, proceeds from this, that they are compos'd of a double Spirit, the one a volatile and ſulphury Saline, and the other Acid, of which the firſt is the principal diſſolvant. I ſay, we ought not to look upon Mercury as a pure Alkali, in regard it has neither the ſame ſubſtance, ſavour, nor the other qualities of Alkali's. Whence it comes to paſs, that its pores being otherwiſe ſhap'd then thoſe of Alkali's, it has not the aptneſs which they have to join to Alkali's, whoſe ſubſtance diſſolvable in water have equally both pores fitted to the ſhape of Acid parts, and parts proper to join with thoſe of the Acids.

I ſay moreover, that if Quickſilver were a true Alkali, it might reſiſt the action of the fire, as the fix'd Alkali's do; or at leaſt it might preſerve it ſelf, being join'd to Acids, and come to be fix'd like volatile Salt of Vipers, or any other volatile Salt, when being united with Spirit of Salt, or any other very acid Spirit. Whereas all the Experiments made for many years prove the contrary, and that no way could ever be found out to ſtop and fix Mercury by the fire, neither alone nor mix'd with Acids, nor with any other ſubſtance whatever. But we are rather to ſay, that it is a mixt body, proper to endure the working of Salts, more eſpecially of thoſe whoſe parts are ſulphury ſaline, then of thoſe whoſe parts are purely acid, and that the ſame Salts being capable to diſſolve or divide its parts, they loſe in that action both the figure and diſpoſition of their parts, not only for that their points are blunted in diſſolving the Mercury, but for that the diſſolv'd parts of the latter fill the ſpaces of the firſt and change their action, even to the depriving them of all their penetration, when they have wholly fill'd up all its pores. As you may obſerve in dulcify'd ſublimate, which never fails of being dulcify'd, when the fluid Quickſilver has fully fill'd up the pores of the corroſive ſublimate. And here you may ſee the difference of the nature of Salts from that of Mercury. For by ſteeping the dulcify'd ſublimate in water, the Salts diſſolving there, leave their natural acrimony in it, which was conceal'd by the Mercury, and the ſame Salts will reſume their figure and qualities, if you evaporate the water; and the Mercury aſſume its former body, if you make uſe of neceſſary means.

But the ſuppos'd name of *Alkali*, not changing the nature of Quick-ſilver, and the various preparations which are made of it, deſerving we ſhould have ſome knowledg of a mix'd body upon which we ſpend our time, and a ſubject too that has ſo long exercis'd the wits of the Curious, I think my ſelf oblig'd to ſpeak my thoughts concerning it. Which are, that Quickſilver appearing to be actually cold, and that in ſuch a degree, that it is impoſſible to hold your hand, nor ſo much as your finger in it long without running the danger of ſome Palſie or other Miſchеivous Accident; and being always ackowledg'd for a great Enemy to the Nerves, and natural heat, the uſe of it is very much to be queſtion'd; or at leaſt, that it is not to be prepar'd or made uſe of but with ſingular Caution. For though it have been for many years us'd for the cure of the Pox and its accidents, that does not render it exempt from the Malignity which is natural to it; of which we too often ſee the ill Conſequences, as well in thoſe who are loſt by the uſe of Quickſilver, when it has been unadviſedly adminiſter'd, or in too great a quantity, as for the miſchеivous impreſſions it leaves behind, and that for the moſt part, in perſons that are ſeemingly cur'd, eſpecially where the evil was inveterate. For though Quickſilver, eſpecially when tak'n inwardly ſeems to perform the function of an Alkali, in this, that the Salt or acid juices in the ſtomach may faſten to it to diſſolve it, it follows not from thence that it is an Alkali. For if it were ſo indeed, and that the venome of the Pox were acid, as ſome believe, the ſame acid would fix it; whereas the diſſolution which the juices make of it ſerve only to augment its volatility, and to render it Corroſive; and that volatility carrying it to the brain and adjacent parts, though it diſſolve the flegm by a property peculiar to it, and open a paſſage for the Flegm to evacuate at the mouth, and to force out with it the venom of the

diſeaſe, yet it does not produce thoſe effects without ulcerating the Salivary Veſſels, and the parts adjoining; whence follows corroſion and conſumption of the proper ſubſtance where thoſe Ulcers happen; and that it leaves thoſe marks behind it, which are never to be defac'd.

It were to be wiſh'd however, that the venom of the Pox were a pure acid; for if it were ſo, we might ſeek to cure it by the uſe of it by fix'd or volatile Salt Alkali's; or in thoſe of Pearls, Crabs-eyes, Corals, and many other ſuch like ſubſtances, able to mortifie and dulcifie the acids, without injuring the parts; and by conſequence, we might lay aſide Quickſilver, ſo dangerous in its effects. But theſe ſorts of remedies not being able to ſubdue the venom of the Pox, in my opinion it can never be ſaid to be a true acid, no more then of a pure volatile or fix'd Salt nature. But rather we muſt look upon it as a venom, whoſe nature is otherwiſe very difficult to be underſtood, but by the ſad effects which it cauſes by mixing it ſelf with all the humours, and infecting chiefly the whole maſs of the blood, and ſpreading it ſelf over the whole habit of the body. I think alſo that the great and different progreſſes, and the fatal conſequences which this venom produces, and thoſe which we obſerve alſo ſometimes after the uſe of Mercury, require that the Phyſitians ſhould make new reflections upon it; that when they find this venom working different effects upon the cholerick, the flegmatick, and the melancholy, and upon mix'd conſtitutions and habits of body, they may make choice of the time and manner, to exhibit Mercury when it is neceſſary, and that they may make uſe of other remedies when Mercury is unſeaſonable.

But though the uſe of Mercury be not always favourable to all ſorts of perſons, yet the great relief that many may receive thereby, not only for the cure of the Pox, but many other diſtempers, engages me to produce the principal preparations that Chymiſtry can make of it.

CHAP. LXVI.

Of the Purifying of Quickſilver, *and of turning it into* Cinnabar.

THey generally waſh Quickſilver in Vinegar where common Salt has been diſſolv'd, or with ſome good Lye made with Quicklime and ſome Lixivial Salt, putting the Quickſilver in a double glaſs Bottle well ſtopp'd, and ſhaking it with the one or the other of theſe liquors, either to ſuck up, or ſeparate one part of its impurities; then having pour'd out thoſe liquors by inclination, and well dry'd the Quickſilver with ſome old clean cloth, ſtrain it through a piece of Chameiſe Skin, in which the courſeſt droſs of the Quickſilver will ſtop. But though theſe ways may be very well made uſe of, you may alſo put it into a Retort, and having plac'd it in a Sand-bath, draw forth the Mercury pure, forcing it with a gradual fire, and ſtop the foulneſſes in the Retort. But the better way is by mixing it with Salt Tartar, and Quicklime pouder'd, and diſtilling it alſo through a Cornute; for the impurities of the Quickſilver will remain with the Lime and Salt Tartar. They who may have any occaſion to make any Amalgama of Gold or Silver, may by putting the Amalgama into a Cornute in a Sand-bath, and forcing it with a gradual fire, cauſe the Mercury to come forth free from all its filth, which it will leave in the Retort. But Quickſilver quicken'd with Cinnabar, being the moſt ſought for, though vulgar Cinnabar is eaſie to be had, I will not ſuppreſs the preparation, no more then that of its rectification into flowing Mercury.

Put half a pound of powder of Sulphur in a large earthen Pot glaz'd within, fit to reſiſt the fire; and having ſet it upon lighted Coals, and put a pound and a half of flowing Mercury into a piece of Shamoys Leather, and ty'd it with a hard knot, when the Brimſtone is well melted, drop the Quickſilver upon it, preſs the knot between your hands, ſo that the Quickſilver may paſs through the pores of the Leather, ſtirring the ſubſtances in the mean time with a wooden Spatula, and continuing this

this preſſing forth and ſtirring the Mercury till it be all ſqueez'd through the Leather, and that it be ſo united with the Sulphur, that appearing no more, they ſeem both reduc'd into a black maſs. Let this maſs cool, and having beaten it to powder, and put it into an Earthen pot proper for ſublimations, join to the mouth of that pot another of the ſame bigneſs, with the bottom uppermoſt, having a little hole in the middle of the bottom; then lute the cloſures, and ſtop the hole with a little piece of paper, and begin your ſublimation with a gradual fire, ſoft at the beginning, and at length encreas'd and continu'd for ſome hours, and quite ſtopping up the little hole, by which means the Sulphur being incorporated with that portion of Sulphur which is requiſite for it, will ſublime to the upper part of the upper pot, leaving ſome fæces in the lower. Then when the Veſſels are cold, you ſhall find the Mercury ſublimated into Cinnabar of a very red colour, enterlac'd with long brown glittering Veins, like in ſhape to thoſe of Antimony. But this colour will appear much more red and lively when it is broken to pieces and ground; and therefore it is that the Painters make uſe of it.

This Cinnabar is never exhibited inwardly, but ſometimes the fume of it is us'd to provoke ſalivation in thoſe that are pox'd, if they be ſtrong and luſty. It is alſo mix'd in Ointments to cure dry Scabs, and ſuch infirmities of the Skin. This is call'd artificial Cinnabar, to diſtinguiſh it from natural, which is found in ſeveral parts of *Germany* and *France*, ſublimated naturally in the Entrails of the Earth by ſome ſubterraneal fire, which uniting the particles of Mercury with thoſe of Sulphur, which are to be found in the ſame place, cauſes them to take the form of Cinnabar; which uſually nevertheleſs is full of filth, which conſiſts chiefly in Earth and little Stones that are generally mix'd with it.

You may break the union which the Sulphur has made with the Quickſilver, and reſtore the latter to its natural body and fluidneſs in this manner: Powder the Cinnabar very finely in a Marble Mortar, and having mix'd it with as much in weight of the filings of Iron, put this mixture into a ſmall glaſs Retort luted about, and having ſet it upon a Culot about two fingers high in the midſt of a proportionable Furnace, built in the dry of Bricks, ſo order'd as to make a Circle never ſo little higher then the Retort, put little black Coals round about the Culot, and upon them in three or four places, ſome few fire red Coals to kindle the reſt by degrees, then having fill'd the whole largeneſs of the Furnace with ordinary Coal; and having cover'd the Retort, and fitted a ſmall Recipient to its neck half full of water, leave the Coals to kindle of themſelves, and the fire to act at liberty. For by this means the acid of Sulphur ſticking to the Mars, with the pores whereof the figure of its parts do better agree then with thoſe of the Mercury, and quitting the latter, the fire forces it out of the Retort, and to take its former body, falling into the water. By this means all extrinſecal ſubſtances mix'd with the Cinnabar, being ſtopp'd in the Cornute with the filings of Iron, after you have pour'd the water out of the Recipient by inclination, you ſhall find at the bottom the Quickſilver very pure, and fit for all ſorts of uſes and preparations.

CHAP. LXVII.

Of Red Precipitates of Mercury.

SOme there are who very unadviſedly give the name of Precipitates to certain Calxes of Mercury, which are frequently in uſe. Whereas the name of Precipitate is proper only to certain ſubſtances that have been diſſolv'd in ſome corroſive liquor, and which have been afterwards compell'd to quit their diſſolvant, and precipitate to the bottom of the Veſſel. But cuſtom prevailing above reaſon, I muſt follow thoſe who have writ before me, and briefly ſet down the beſt of their preparations.

Schroder, and ſome others, produce a preparation of red precipitate made with Mercury alone, which being better to adminiſter inwardly then thoſe which are uſually prepar'd by diſſolving the Quickſilver in corroſive Spirits, deſerves to be firſt mention'd,

mention'd. You muſt provide an Infernus, or *Hell*, which is a Veſſel of good double glaſs, the neck whereof muſt be long and very much like a Funnel, the end whereof muſt be large and very broad. Put into this Veſſel four ounces of Mercury reviv'd from Cinnabar, ſet it in Lamp-Furnace in a Sand-bath very equally in its poiſe, ſo that the Mercury may cover the bottom of the Veſſel all alike. Then having fill'd with Oil, and lighted three Cotton weiks of a moderate bigneſs, and ſet the Lamps under the Bath, ſo order it that the Matches may burn without diſcontinuance, and that the Oil may not fail in the Lamp for fifteen days; at the end whereof having made every weik a third part bigger, burn them under the Bath all the reſt of the month; then having made every weik bigger by one half, burn them under the Bath for another Month, or till the Quickſilver be chang'd into a red and ſhining powder. 'Tis ſufficient all the while to cover the top of the Veſſel with a ſingle paper, and to take care that the Oil be not wanting in the Lamp, and that all the weiks burning equally and without diſcontinuance, may caſt their flame at an equal diſtance to the middle of the Bath. For by this means the parts of the Quickſilver, having been ſo long agitated and intermingled by the continual working of the fire, looſe at length their natural fluidneſs, and tire themſelves in ſuch ſort, that they become a red and ſhining powder. This operation requires great care and patience; but the trouble is not great, if you have a Veſſel and a Furnace proper, and that the Veſſel that contains the Quickſilver be ſet in an equal poiſe. You may waſh this powder with Cordial-waters; or pour upon it Spirit of Wine, and having digeſted them for ſome time together, draw off the Spirit, and keep the powder for your uſe.

This powder is diaphoretick, and apt to provoke great ſweats, but it often cauſes vomiting withall. This is one of the beſt preparations of Mercury for the extirpation of Venereal diſtempers, and to carry off Agues. It is a ſpecifick againſt the worms. The doſe is from two or three to ſeven or eight grains in ſome Conſerve or Sweat-meat. You may before you begin this preparation, add to the Mercury an eighth part of its weight of Gold purify'd by Antimony, and having made an Amalgama of it, and put the Amalgama into the Veſſel, proceed in all things as before directed; and the remedy will be ſo much the better. You may alſo add to the Mercury a quarter of its weight in pure refin'd Silver, and make an Amalgama of it. Or elſe Amalgamate together half an ounce of Gold, and an ounce of Silver, and four ounces of Quickſilver, and fix them together as I have directed.

There is a precipitate of Mercury call'd Coralline, or the Coralline Secret, by reaſon of its Coralline colour, after this manner. Put into a Matras four ounces of Quickſilver reviv'd from Cinnabar, and having pour'd upon it as much as it weighs of good Spirit of Niter, and plac'd the Matras in a Sand-bath moderately hot, after the Mercury is well diſſolv'd, ſlope the neck of the Matras a little, and increaſing the fire under the Bath, evaporate the Spirit of Niter till the ſubſtance be quite dry. After which, pour as much Spirit of Niter upon the dry ſubſtance as before, and when it is diſſolv'd ſlope the neck of the Matras and evaporate the Niter as before, repeating yet twice more the addition and evaporation of the Spirit of Niter, and forcing the fire after the laſt evaporation, till the Precipitate look perfectly red. Then break the Matras, and powder the precipitate in a Marble Mortar, and moiſtening it with good Spirit of Wine, never ſo little above the ſubſtance, let it burn, repeating ſix times the ſame addition and conſumption of the Spirit of Wine upon the precipitate. Then having powder'd it once more, keep it for your uſe.

This Corralline precipitate is highly eſteem'd for the cure of all Venereal diſtempers, Dropſies, Rheumatiſms, and intermitting Agues. It purges univerſally bad humours, chiefly Flegm, which it diſſolves, and carries off by the moſt commodious ways. It is given in ſome Conſerve or Confection, from three or four to eight or ten grains. It is outwardly apply'd for the cure of old Ulcers, above all Venereal; as alſo to take away all ſorts of Scabs, mix'd in Pomatums.

As to the vulgar red precipitate, you cannot miſs of it, proceeding as follows. Put into a glaſs Retort what quantity of flowing *Mercury* you pleaſe, and having pour'd upon it as much good Aqua-Fortis, or as much good Spirit of Niter as is neceſſary to diſſolve it, ſet the Retort in a Sand-bath moderately hot; and when the Diſſolution is made, bury the Retort in the Sand all over, and having fitted a half Ball to the beak, increaſe the fire by degrees and continue it, till the Aqua-Fortis be almoſt all drawn off. Then letting the Bath cool, cohobate the Aqua-Fortis

upon

upon the *Mercury* that remains in the Cornute, and draw off the Aqua-Fortis as before, repeating three times the ſame Cohobations and Abſtraction of the Aqua-Fortis, forcing the fire at laſt more then ordinary, to augment the colour of the Precipitate which will be of a much fairer red, then that which many calcine at the end in a Crucible, where there is not the weight neither of the *Mercury* made uſe of, beſides that you are expos'd to the miſchievous vapours of the Aqua-Fortis during its working upon the precipitate. The operation being ended and the Sand-bath cold, you ſhall find the precipitate at the bottom of the Cornute in a red ſhining Maſs, which you may pouder, and keep ſo in a ſtrong double glaſs bottle, or elſe burn over it good Spirit of Wine, if you intend to give it inwardly. Though it is not to be given at all but to men of ſtrong Conſtitutions, and not above ſeven or eight grains at the moſt at a time. The principal uſe of it being for outward applications, as well in Pomatums and other remedies prepar'd to cure the deformities of the Skin, and mix'd in Ointments to conſume proud-fleſh and other ſuperfluities of Malignant and Venereal Ulcers. It is the uſual remedy that Chirurgions apply to Cankers and Warts upon the ſecret parts.

If you intend this preparation inwardly, you muſt not make uſe of Aqua-Fortis in the diſſolution of the *Mercury*, but Spirit of Niter, or Aqua-Fortis compos'd and made only of Niter and Allum.

CHAP. LXVIII.

Of Yellow and Roſe-colour Precipitates of Mercury.

PUT into a glaſs Cornute three or four ounces, or what quantity you pleaſe, of Quickſilver well purify'd, and pour upon it four times as much the weight of Spirit of Vitriol or Sulphur well rectify'd; place the Cornute with the neck upright in a Sand-bath over a moderate fire, and leave it there till the Spirit have quite diſſolv'd the *Mercury*, then ſloping the neck of the Cornute upon one ſide, the body being all over buried in Sand, fit a half ball to the neck, and draw off the moiſture with a gradual fire, encreas'd toward the end, and continu'd till the *Mercury* remain at the bottom in a white Maſs. And you muſt obſerve that the firſt water which comes away will be almoſt inſipid, and that the acid Spirits will not appear till toward the end, becauſe the *Mercury* ſtill retains no good part of the Spirits which have diſſolv'd it. The Veſſels being cold, having finely pouder'd the Maſs in a Marble Mortar, pour upon it a good quantity of hot water, till the Mortar be almoſt full, and you ſhall ſee at the ſame time the white pouder chang'd into yellow. Then let the pouder ſettle, and pouring out the water that ſwims above it by inclination, fill up the Mortar with as much warm water as before, and waſh the powder with ſeveral ſuch ſhiftings of water, till it be exactly ſweeten'd. Then dry it and keep it for your uſe.

This powder is call'd yellow precipitate becauſe of its colour. It is call'd *Mineral Turbith*, becauſe it is drawn out of a Mine, and diſturbs the natural Economy of the body, violently purging bad humours upward and downward. For which reaſon it is not very frequently us'd, eſpecially in *France*, nor given but to very ſtrong Conſtitutions in Venereal diſtempers, and to them no more then from three or four to five or ſix grains at a time in Bolus in ſome Conſerve or ſome other proper medicine. However the force of this powder may be abated by burning over it Spirit of VVine rectify'd, for five or ſix times.

Roſe colour Precipitate of *Mercury* is thus prepar'd; put four ounces of *Mercury* well prepar'd into a Glaſs Cucurbit ſomewhat large, and having plac'd it in a Sand-bath moderately hot, pour upon it double its weight of Spirit of Niter, and when the Niter is diſſolv'd, take off the Cucurbit from the Bath, and pour by little and little the hot urine of a healthy man, till ebullition ceaſe; by this means the *Mercury* diſſolv'd, will precipitate to the bottom, of a Carnation colour, through the U-

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nion which the Spirit of Niter has contracted with the Salt of Urine, and the impreſſion which their conjoining has made upon the *Mercury*. Let the Precipitate ſettle, and having pour'd out the Liquor that ſwims at the top by Inclination, waſh the precipitate ſeveral times in fair water, till all the Acrimony of the Diſſolvant and Precipitant be carry'd off, and that the Precipitate be exactly dulcify'd.

The cloſing of the Urine with the Spirit of Niter renders the effects of this Precipitate much more gentle then that of *Mineral Turbith*, whoſe effects depend chiefly upon the laſt Spirits of Vitriol, which have diſſolv'd it, and are as it were concenter'd with it. Therefore this Precipitate only purges downward, and you may give from five or ſix to nine or ten grains. As for the diverſity of colour I impute it to the various action of the acid or Saline Salts, to their various mixture with the *Mercury*, and the different operations of the fire, or the Liquors. I omit Tanned colour'd Precipitate of *Mercury*, which is done by diſſolving it with Aqua-Fortis, or Spirit of Tartar, and precipitating it with Liquor of Tartar. I omit precipitates with a mixture of Copper after the *Mercury* is diſſolv'd, and ſeveral others, proceeding next to the white Precipitates.

CHAP. LXIX.

Of white Precipitates of Mercury.

PUT eight ounces of Quickſilver reviv'd from Cinnabar into a glaſs Cucurbit of a moderate bigneſs, and pour upon them twelve ounces of *Aqua-Fortis* drawn from Niter and Alum without any Vitriol, and give them time to diſſolve the *Mercury* cold, diſſolving apart eight ounces of Bay-Salt in three or four times as much the weight of River water, and filtring the diſſolution through courſe paper, getting ready at the ſame time a good quantity of River water ſtrain'd through a fine Linnen cloth. Then having pour'd the Salt water into a large Earthen pan, and about two pints of River water upon the diſſolution of the *Mercury*, pour this mixture all at a time upon the Salt water; and by this means the greateſt part of the Mercury will coagulate into a ſubſtance very white, which will begin to precipitate to the bottom. You may let the precipitate ſettle for ſome time, pour forth by Inclination, and keep in an earthen pot, the liquor which ſwims at the top, eſpecially if you will ſave the *Mercury* which will remain in inſenſible parts in the Liquor. But if you will not give your ſelf that trouble, preferring the whiteneſs of the precipitate to the quantity, having pour'd out the diſſolution of *Mercury* upon the Salt water, fill the Earthen pot with River water ſtrain'd through a linnen cloth; then leaving the Precipitate to ſettle, and pouring out by Inclination the liquor that ſwims at the top, fill the Earthen pot containing the precipitate with the filter'd water which you muſt waſh over and over again with ſeveral filter'd waters, till it be perfectly dulcify'd. After which dry the precipitate, and keep it for your uſe.

It was not without reaſon, that I ſay'd you might reſerve in an Earthen pot the firſt Liquor that ſwims above the precipitate, becauſe you may by pouring upon it Liquor of Tartar ſeparate the portion of *Mercury* which the Bay-Salt could not precipitate. For it is not as ſome ſuppoſe the more exceſſive bigneſs of parts, nor the Cubick figure of Bay-ſalt, not the weight of the ſall upon the diſſolution made by the Niter that can ſhake or break the points of the Spirit of Niter when it has diſſolv'd the *Mercury*; but it muſt be attributed to the Union of the acid part of the Spirit of Niter made at that time with the fix'd Salt part of the Bay Salt: or elſe we may impute it to the figure and aptneſs which the Salts diſſolv'd in water have to join mutually one with the other, and to expel by that means all forraign ſubſtances, which being mix'd among them may prevent their Union, inſomuch that being variouſly figur'd, they intermix and peſter one another in ſuch manner that from thence ariſes a Compoſition, the parts whereof are otherwiſe figur'd, as you may obſerve in Aqua-Regalis, by the conjunction of the Salts Ammoniack, Bay Salt, or Sal-Gemmæ, with Spirit of Niter. Otherwiſe if the more exceſſiive bigneſs of the Points of the Salt Marine, their ſhog or ſhaking carry'd the

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precipitation of ſubſtances diſſolv'd in Spirit of Niter, we ſhould then find the firſt with their thick points, ſeparated from thoſe of the Spirit of Niter. Whereas by evaporating and cryſtallizing the liquor, we find their points reciprocally mix'd one with another, making a new body together. For though the parts of all the Salts dry'd, ſeem of a different thickneſs and ſhape, the ſame parts nevertheleſs diſſolv'd in water, are thicker or ſmaller according as there is more or leſs liquor; ſince we find by experience, that Niter cryſtalliz'd in a greater quantity will yeild Cryſtals much more ſlender, then that which ſhall be diſſolv'd in a leſs quantity of water. Moreover the water wherein the Salts are diſſolv'd, making a great diviſion of their parts, and diminiſhing the bigneſs and thickneſs of their points, renders them more fit to thruſt themſelves one into another, which they could not do when the Salts were dry and reduc'd into great Cryſtals. 'Tis alſo known, that 'tis chiefly the water which gives the Salts the liberty of motion and action, and that ſo making them as well more eaſily capable to penetrate other bodies, it may enable them to penetrate themſelves, and to unite mutually one with the other.

But though the union of the parts of the Salt Marine with thoſe of the Spirit of Niter, were of force enough to puſh forth of the pores of the latter a good part of the Mercury diſſolv'd, the Salt Marine not abounding in quantity ſufficient, and not containing fix'd Salt enough, to fill up all the pores of the acid part of Spirit of Niter, it happens, that if you pour liquor of Tartar upon the liquor which you have reſerv'd, and upon what the Salt Marine could not precipitate, the Salt of Tartar filling up the pores of the Acid of the Spirit of Niter, and its own pores filling themſelves reciprocally with the Acid, the Mercury that lay conceal'd, is conſtrain'd to make way, and to precipitate to the bottom; which would never come to paſs, if the thickneſs and bigneſs of the points of the Sea-Salt, their weight or violent puſhing againſt thoſe of the Spirit of Niter had been the true cauſe of the precipitation of the Mercury. Conſidering that it happens alſo, that the Salt of Tartar, not being able to meet with certain acid particles that retain'd ſome remainder of the Mercury in diſſolution, if you pour upon them Salt of Urine diſſolv'd, theſe laſt acid particles will unite themſelves and quit the remainder of the Mercury. Whence will follow a new precipitation, though leſs then the firſt, becauſe of the leſſer quantity of Mercury that remain'd.

You may by putting white Precipitate dry into a Matras in a Sand-bath, cauſe it to ſublimate with a gradual fire, obſerving the ſame method as for ordinary ſublimates, and have a very gentle ſublimate, very ſerviceable in the cure of Venereal diſtempers, giving it in Bolus from ten or twelve to twenty or thirty grains, mix'd with ſome Conſerve, or other purgative remedy.

You may alſo give white Precipitate without ſubliming it, but it muſt be then to perſons of a ſtrong conſtitution, and only from three or four to ſeven or eight grains; becauſe that notwithſtanding all the Lotions, ſome particles of the Salts lye ſtill conceal'd in its pores, that cauſe it to purge upward and downward. But this Precipitate is more frequently us'd externally for the cure of Scurfs, Tetters, and other deformities of the Skin, being mix'd and apply'd with proper Liniments. It is alſo us'd in Pomatums to beautifie the face; but though it manifeſtly whitens the complexion, the Quickſilver being an enemy to the Nerves, and natural heat, the frequent uſe of it may at length prove very dangerous.

But becauſe of the ill qualities that Aqua Fortis bequeaths to Mercury after it has diſſolv'd it, and the change of colour which may thereupon happen to it; of which we ſee the effects when we pour upon it liquor of Tartar, you may prepare a white Precipitate without Aqua Fortis, according to *Schroders* method.

Powder very finely eight ounces of Salt Ammoniack, and having put it into a glaſs Cucurbit, ſet it in a Sand-bath moderately hot, and having pour'd upon it three or four times as much the weight of River-water, when the Salt is diſſolv'd, filter the diſſolution through a courſe paper; and returning it into the Cucurbit made very clean, diſſolve without any heat in the filter'd liquor eight ounces of corroſive ſublimate. After which, pour upon the diſſolution drop by drop, four ounces of liquor of Tartar, which uniting it ſelf with the acid part of the Salts, which aſcended with the Mercury in ſublimation, and kept it ſtill in diſſolution, will force it to give way, and cauſe it to precipitate by degrees in a white ſubſtance. Nevertheleſs you muſt at the ſame time pour upon the precipitation a good quantity of fair water, ſtrain'd through a Linnen Cloth, as well to weaken the diſſolvants, as to moiſten the Salts. Then let the precipitate ſettle, and having pour'd into another Veſſel

the liquor that ſwims at the top, waſh it with ſeveral fair waters, till it be perfectly dulcify'd; then dry it in the ſhade between two papers, and keep it for your uſe.

This Precipitate purges upward and downward, like the former; but whereas you may not give above ſeven or eight grains of the former, you may give to twelve of this, becauſe that the ill qualities of the acid Salts of the ſublimate being weaken'd by the action of the Salt Ammoniack and Tartar, it is not ſo deeply fix'd as that of the Aqua Fortis in the former, where that water is only temper'd by the Bay-ſalt. Whereby you may obſerve, that the cohobation of the liquor of Tartar upon the Mercury ſublimated, diſſolv'd in the liquor of Salt Ammoniack, does not work the ſame effect as upon the diſſolution of Mercury made with Aqua Fortis; in regard that whereas the Precipitate of ſublimate is perfectly white, that of Mercury diſſolv'd by Aqua Fortis becomes almoſt red, by the mixture of the liquor of Tartar. Which I think is to be imputed to the ſulphury part of the Spirit of Niter, the ſecret red colour whereof manifeſts it ſelf in the diſtillation of Aqua Fortis, and by its union with the ſecret ferment of the Salt of Tartar; ſince that red colour never happens to the Precipitate diſſolv'd by Aqua Fortis, unleſs you mix with it the liquor of Salt Marine, no more then to the diſſolution of ſublimate corroſive, unleſs you mix with it the liquor of Tartar; becauſe there is not any ſubſtance Nitro-ſulphurous either in the one or the other which can give this colour, acting reciprocally with the Salt of Tartar.

It is good to give this Precipitate in purgatives, among the reſt in *Confectio Hamech*, as well for the cure of Venereal diſtempers, as of the Kings Evil, the Scurf, the Leproſie, and all deformities of the Skin, for which purpoſes this Precipitate is very ſerviceable, mix'd with Liniments or Pomatums, and apply'd externally; alſo its Lotions, which you ſhall do well to keep for the ſame uſes, under the name of the *Polonian Water*.

CHAP. LXX.

Of Corroſive Sublimate.

THE ſlender union and mobility of the parts of Quickſilver rendring its ſubſtance very eaſie to be divided and penetrated by the action of the corroſive Salts, the moſt acid and ſubtle parts of the ſame Salts thruſting themſelves into the pores, and beginning to form a kind of union with it, never quits it, unleſs you mingle ſome other ſubſtance with it, which being more apt to unite with the ſame acids, and their pores better fitted to their points, be more able to ſtop them then Mercury is. Whence it afterwards comes to paſs, that expoſing the Mercury, naturally volatile, to the fire, it would evaporate into the air with the ſame acid, if it found not ſome Veſſel fit to retain it; and that alſo being in a Matras, and forc'd by a gradual fire, it gives way to the activity of the fire aſcending by degrees to the top of the Veſſel, and that raiſing with it ſome acid part of the Salts, with which it was mix'd, forms with them a white body fill'd with ſhining and cryſtalline veins, ſeparated and keeping above the groſſer parts of the Salts when the operation is over, and all is cold.

Some direct this way, That having put a pound of Mercury well purify'd into a Retort, and having pour'd upon it as much in weight of Aqua Fortis, or Spirit of Niter, and plac'd the Retort in a Sand-bath moderately hot, when the Mercury is diſſolv'd, to augment the fire, and to obſerve the rules of abſtraction of the diſſolvant, till the Mercury remains in maſs at the bottom with the moſt fix'd parts of thoſe liquors. After this, that having beaten to very fine powder a pound of Vitriol calcin'd to whiteneſs, and as much Salt decrepitated, to mingle them together with the maſs of Mercury powder'd alſo, and having put the whole into a Matras to make a ſublimation thereof, whereby you ſhall find at length above all the groſſer parts of the Salts, the Mercury united with their acid part, ſticking in a ſolid white cryſtalline form to the top of the Veſſel. But though this preparation may be convenient for thoſe that will not be troubled with the duſt that ariſes from the

Salts,

Salts, when they mix them ſimply with the raw *Mercury*; and that it may do well enough when the ſublimate is only intended for external uſes; yet the ſharp and particularly the Salt Sulphury parts of the Niter equally reſiding both in the Spirit and in the Aqua-Fortis, being ſhrewdly to be ſuſpected when you prepare this ſublimate with a deſign to dulcify it, for internal uſes, it will be much better not to make uſe of theſe Sprits at all. For though Experience teaches us that in the abſtraction of theſe Diſſolvants, we draw off ſo great a quantity of Corroſive Spirit, as is ſufficient to diſſolve anew almoſt as much *Mercury* as before, notwithſtanding the watry part which is mingl'd therewith; yet the Maſs is impregnated with the moſt corroſive parts of the Spirits, which had diſſolv'd the *Mercury*, and the ſame Spirits accompany it in ſublimation. But that you may have a Corroſive ſublimate proper to make a Dulcify'd ſublimate, and fit to be us'd inwardly.

Calcine a requiſite quantity of *German* Vitriol to whiteneſs, and decrepitate as much Salt of *Mars*, and having reduc'd them apart to a very fine powder, weigh out a pound of each, and as much *Mercury* reviv'd from Cinnabar, and beat them together in a Marble Mortar with a wooden Peſtle, ſprinkling them from time to time with never ſo little Spirit of Vinegar, only to allay the duſt; and beat them till the *Mercury* be ſo well mingl'd with the Salts, that it be hardly to be ſeen, but ſeem to make one body with the red. After which having put this mixture into a Matraſs, of which two thirds muſt remain empty, ſet it in a Sand-bath in a Capſula proportionable, plac'd in a proper Furnace: where by a fire very ſlight at the beginning, then augmented by degrees, and forc'd at the end, cauſe the *Mercury* to aſcend with the acid part of the Salts to the top of the Matraſs in a white and Cryſtalline ſubſtance. Whence you muſt take it forth when the ſublimation is ended, and the Veſſels are cold, breaking the Matraſs; and the bottom whereof you ſhall find the thicker part of the Salts that could not aſcend. After that, having beat the ſublimate in a Marble Mortar, with as much Vitriol calcin'd white, and decrepitated Salt pouder'd, as before, put the whole into a new Matraſs of the ſame bigneſs with the former, and repeat the ſame Sublimation again. Do this a third time, and then you ſhall have a Salt very corroſive; but ſuch a one whoſe corroſion proceeding only from the acid part of Vitriol and Salt of *Mars* will be eaſily ſubdu'd, upon uſing the neceſſary means for Dulcification.

The acid parts of the Salts which are united with thoſe of the *Mercury* render this ſublimate ſo corroſive, that it will not only corrode the internal and external parts of Animals, but of all ſorts of ſubſtances, even Metals themſelves. But this ſublimate, like all other Salts, its unable to act, being dry, and that is activity is greater or leſſer according to the quantity of moiſture which it meets with. And therefore it would do great ſpoil in the ſtomach, becauſe it would there meet with moiſture ſufficient to ſet it at work. And therefore beſides the uſe of it in *Phagedenick* water, the moſt common is that for the preparation of Dulcify'd Sublimate.

CHAP. LXXI.

Of Dulcify'd Sublimate, *or* Mercurius Dulcis.

BEat in a Marble Mortar with a wooden Peſtle a pound of Corroſive ſublimate prepar'd as I have ſhewn, and having added to it three quarters of its weight of Quickſilver reviv'd from Cinnabar, and beat them ſo long together that the Quickſilver be not at all to be ſeen, but that both together look like a grey Uniform pouder. Then put this pouder into a Matraſs, or into a very thin round glaſs bottle, of which two thirds muſt be empty. Place the Veſſel in a Sand-bath and proceed to Sublimation with a Gradual fire, obſerving the ſame method in all things as for the ſublimate before. The whole being cold; after you have broken the Veſſel in two in the middle, ſeparated and thrown away the red pouder that remains at the bot-

tom, and reſerv'd the white pouder that ſticks to the neck of the Veſſel, taſte it, and if you perceive any Acrimony, beat it again in the ſame Mortar, adding and beating together with it an ounce of flowing *Mercury*, or as much ſublimate as will drink it up. Then put this pouder into a new Matraſs, make another ſublimation and ſeparate the pouders above and below as at firſt. After which, having repouder'd the ſublimate in the ſame Mortar, and put the pouder into a new Matraſs, make a new ſublimation. And by that time the ſublimate will be very ſightly, and ſufficiently ſweeten'd. But if you would make it yet more beautiful, put into a new Matraſs in the ſame bath, and reiterate Sublimation, ſeparating the pouders afterwards both at the bottom and top of the Matraſs; and keep the Sublimate for your occaſions.

The repeated Sublimations of this preparation may well diſſipate ſome part of the acids contain'd in the Sublimate Corroſive: but the remaining parts being too ſuperabundant, and too much fix'd in the Corroſive ſublimate, to be wholly carry'd off by Sublimations; it is no wonder that the flowing Quick-ſilver, added to the Corroſive Sublimate, vvas capable to mortify the acids, and change their Corroſive Quality into Dulcify'd. And yet 'tis no great Marvel, conſidering that vvhereas the vvhole ſubſtance of the *Mercury* was fill'd with acids, to make a Corroſive Sublimate, here all the Pores of the acids are fill'd vvith *Mercury*, ſo that their points being clos'd up, they are then incapable to act and penetrate. Seeing that Experience teaches us, that the Dulcifying of Corroſive Sublimate is never perfect, if you have miſs'd the mixing of as much flowing *Mercury* as was neceſſary to fill the pores, and cloſe up the points of the Acids, which render'd it corroſive; and that *Mercury* is the only ſubſtance than dulcify it, by ſubliming with it. We muſt not think that theſe points penn'd up, are thereby deſtroy'd; ſince they may be ſeparated at any time by reviving the Quickſilver from either the one or the other ſublimate, by the means of Salt of Tartar, Quick-Lime, or any other Subſtance of the like nature; which filling the pores of the acid and being by them reciprocally fill'd, and uniting themſelves with it, will reſtore the Quickſilver its former liberty and form.

Dulcify'd Sublimate is often us'd in the cure of Venereal diſtempers. But it is very prevalent alſo in Dropſies, and in obſtinate obſtructions of the Liver, Spleen and Matrix; but more eſpecially to kill worms, giving it in Bolus mix'd with purgatives, that it may attend their operation; chiefly if you fear it ſhould raiſe a Salivation. The doſe is from half a Scruple to half a dram, and ſome to two Scruples, where the Patient is of a ſtrong conſtitution, and more powerful effects are expected.

I ſaid before that you might prepare a Dulcify'd ſublimate of white Precipitate without addition. The ſame thing may be done with yellow Precipitate of *Mercury*, by ſublimating it alone after you have well waſh'd it: by which means you ſhall have a ſweet Sublimate that will only purge downwards, of which you may give from three or four to ſeven or eight grains. But you may do yet better, if after you have beaten in a Marble or Glaſs Mortar four ounces of yellow precipitate *Mercury*, well waſh'd, and dry'd, and incorporated with it, as much flowing *Mercury* as will ſuck it up, you ſublimate the pouder after the ordinary manner; and then pouder the Sublimate again and re-ſublime it two or three times without any addition. For by this means you ſhall compaſs a Sublimate very well Dulcify'd, which will only only purge downwards, of which you may give to ten or twelve grains in all diſtempers, where the ordinary Dulcify'd Sublimate is us'd.

CHAP.

CHAP. LXXII.

Of Mercurial Liquors.

SOme have given the name of Oil to certain Liquors extracted out of *Mercury*, or from ſubſtances mix'd therewith. But the names not changing the qualities of things, I will not ſtand to decide the queſtion, but give you thoſe preparations which I think moſt fit to be inſerted. The *Poloniſh* water, and the *Phagenick* water, may paſs for *Mercurial* Liquors. But there are *Mercurial* Liquors more concenter'd and more powerful of ſeveral ſorts. As for example,

Grind very finely upon Porphyry equal parts of Sublimate Dulcify'd, and Sal-Ammoniack; then having ſpread the pouder in a very fine Dripping-Pan, and ſet it a little ſloping in a Cellar, or in ſome moiſt place, and plac'd a proper Recipient under the place where the dripping is pour'd out, leave it ſo till all the Salts are diſſolv'd and chang'd into a red Liquor, which you ſhall find in the Recipient mix'd with the *Mercury* reviv'd, which you muſt ſeparate for the ſame uſes as before. This Liquor is for external uſes to conſume proud fleſh, and the ſuperfluity of Wounds and Ulcers, particularly Venereal; and though the ſubſtance of the *Mercury* ſeem to be almoſt all reviv'd, the Liquor however has retain'd particles enough to deſerve the name of *Mercurial*.

Agricola, *Hartman*, and other Authors after them, have deſcrib'd a *Mercurial* Liquor of *Jupiter*, which I thought fit to inſert. Melt in a Crucible a pound of *Engliſh* Tin, and having heated a pound of *Mercury* reviv'd from Cinnabar, pour it upon the Tin, and make an Amalgama, which you muſt waſh with hot Salt-water till the Amalgama be as white as Snow. After which having well wip'd it and beaten, it in a Marble or glaſs Mortar, with two pound of Sublimate Corroſive, ſpread the mixture plac'd with a Recipient as before; where you ſhall find the Salts diſſolv'd into Liquor, among which will be the Liquor, which will be reviv'd, by the Salts leaving it, and diſſolving into Liquor. Then having ſet the *Mercury* apart for uſe, put the Liquor into a Glaſs Cucurbit in *Balneo Mariæ*, and gently evaporate the ſuperfluous moiſture; and after a Maceration of fifteen days in the ſame Bath over a moderate fire, having pour'd this Liquor into a ſmall glaſs Retort, environ'd with Sand in a Capſula of Earth plac'd in a proper Furnace, fit a Recipient to the beak, and begin your diſtillation with a Gradual fire, but encreas'd at the end, and you will obtain a Liquor, being in ſome ſort like Oil which is very much eſteem'd for the cure of Cankers, Wolfes, Fiſtula's, and all ſorts of Malignant and corroding Ulcers.

The ſame *Agricola* deſcribes another *Mercurial* Liquor, for the preparation of which he preſcribes the beating of equal parts of Dulcify'd Sublimate, and Salt of *Saturn*, and then to put them both together into a glaſs Cornute, plac'd it in a Sand-bath with a Recipient fitted and luted to the Neck; by which means you ſhall draw forth a white ſweet liquor, free from any Acrimony. Then he farther preſcribes to let the Veſſels cool; and to pouder and put the ſettlement into a new Cornute of Glaſs, and having pour'd upon it the diſtill'd Liquor, after a ſoft digeſtion of ſeven or eight hours, to reiterate the Diſtillation in the ſame Bath by which means you ſhall have a yellow Oil, fit both for inward and outward uſes, for the cure of all ſorts of Ulcers, eſpecially Venerial.

The ſame Author preſcribes moreover to mix equal parts of Dulcify'd Sublimate, and Sugar Candy pouder'd, and to put them into a glaſs Cornute, plac'd in a Sand-bath, and with a gradual fire to extract an excellent Liquor for the cure of all ſorts of External and Internal Ulcers.

I cold here inſert ſeveral other Extracts, Sulphurs, Salts, and other preparations of *Mercurity*, were they not more for Oſtentation then profit.

CHAP. LXXIII.

Of Antimony *in general.*

ANtimony is a Mineral body, which approaches very near to the nature of Metals, and is generally found in the Mines of the one or the other. It paſſes for a kind of Marcaſite, being call'd by ſome Marcaſite of Lead. It is thought to be compos'd of a double Mineral Sulphur, the one Metallick, and very near in pureneſs, and ſomething of the colour of that of Gold; the other terreſtrial combuſtible, and almoſt like our common Brimſtone; of a Metallick Fuliginous Mercury, ill digeſted, but better bak'd then ordinary Mercury, and participating of the nature of Lead. Some have thought, that Antimony contain'd in it the principles of all Metals, becauſe it is found indifferently near to all their Mines. It is call'd the Philoſophers Wolf, or Saturn, becauſe that being expos'd to the fire with Metals, it devours or cauſes them to conſume, all except Gold. It is alſo call'd *Proteus*, becauſe of the diverſity of colours which Artiſts give it by expoſing it to the fire.

Some have thought, that becauſe Antimony frees Gold from all its droſs and forreign ſubſtances, it may do the ſame thing in man, by the means of ſeveral Chymical preparations, and that it is able to empty the body of all ill humours by all the iſſues provided by nature, as if it enclos'd that *Univerſal Medicine* to which ſo many Philoſophers and Phyſitians have aſpir'd. But though they cannot boaſt of having found in any one remedy drawn from Antimony the cure of all diſeaſes, yet we may aſſure our ſelves that among the various preparations made of thisMineral yet we may ſay, that there have been extracted from this one Mineral ſubſtance more different remedies toward the cure of diſeaſes then from any other Mineral body.

Raw Antimony in powder is made ſerviceable for Venereal diſtempers, being ty'd up in a knot and boil'd in decoctions for that purpoſe; as alſo in Collyriums, for infirmities of the eyes, and in external remedies to cleanſe dry and cicatrice Wounds and Ulcers.

CHAP. LXXIV.

Of Glaſs of Antimony.

TO make Glaſs of Antimony of a Jacynth colour, chuſe out very pure Antimony, whoſe ſpires are long and gliſtering; and having powder'd them very finely, and put the powder into an earthen Capſula, or earthen Pot unvarniſh'd, yet broad, flat, and fit to reſiſt the fire; put the Veſſel upon a proper Furnace, and kindle a moderate fire in the Hearths-place, which you muſt ſo govern, that having heated the Capſula by degrees, it may be afterwards ſtrong enough to make the powder of Antimony ſmoak, and begin to calcine. When the powder begins to ſmoak, ſtir it gently with a Copper Spatula, without intermiſſion, and keep an equal fire under the Capſula, reaſonably hot, turning your head from the fumes that riſe from the Antimony, which will waſte by degrees, and continuing the calcination, till not only the powder ceaſe to ſmoak, and is become of an Aſh-colour, but that melting ſome part of the powder in a Crucible you find it turn into tranſparent Glaſs. But if the powder chance to clot together in calcination, give over, and powder the clots again, then go on without ceaſing, though it be the labour of ſome days; for the vitrification of Antimony can never be true, if the powder be not well calcin'd, or if there remain the leaſt particle of its Sulphur.

The powder of Sulphur being perfectly well calcin'd, you may eaſily reduce it into glaſs, if you have a good Wind-Furnace In the Fire-place whereof having put a ſmall *German* Crucible upon a Culot, kindle about it a fire proportionable to the capaciouſneſs of the Hearth-place, blowing it with the Bellows, and not put-

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ting into the Crucible above two or three ounces at a time, and it will melt presently; and when the powder is all melted, pour the hot substances into a clean Copper Kettle, and you shall find it turn'd into Glass of a transparent Jacinth colour. If you want more Glass, repeat all the same operations over again.

During the fusion, put a little Cover upon the Crucible to hasten the Vitrification of the powder, and cover also the Furnace with its Cover, the better to keep in and reverberate the heat upon the substance, and hasten the fusion; which will better and sooner be done, and with Coal in the Furnace which I have describ'd, then with four times as much Coal in another, provided the powder be well calcin'd. Neither will it be necessary to keep the powder an hour in fusion, nor to add raw powder of Antimony, nor Sulphur, nor Borax, to facilitate vitrification of the powder, since you may vitrifie in this Furnace alone in less then half a quarter of an hour, and satisfie *Zwelfers* desire, when he uses this Glass for the preparation of Syrrup Emetick.

You may also forbear stirring the melted substance with an Iron rod, to know whether the Glass be diaphonous, for the Antimony corrodes the end of the rod, in that little time, which may spoil the brightness of the colour; besides that if the powder be well melted, the Glass will certainly be of a lovely colour. Some chuse fair weather for this preparation, but that is neither here nor there, if you observe the right method.

Glass of Antimony purges upwards and downwards all tumours that it meets with, if you give it in fine powder from two to three or four grains in some Conserve or Sweatmeat; or from three or four to five or six grains in White-wine, or some Cordial-water. But it must not be given to any but persons of a strong constitution, and who being wide Chested, vomit freely; for its effects are too violent for tender constitutions.

In the mean time you must not admire, that after the consumption of the combustible Sulphur of Antimony, in calcining it for the preparation of its Glass, the same Glass should be still vomitive and purgative, since that its principal qualities proceed from its internal Sulphur, which is not separated but with very great difficulty, as we observe in the Regulus's, Saffrons, and other preparations of Antimony, which notwithstanding the mixture of Niter, Tartar, and Sublimate, *&c.* yet still purge both upward and downward, and since 'tis impossible to take away its Emetick and purgative qualities, but by calcination and keeping it long upon the fire with three times the weight in Niter; the simple acids not being able to tame iss vomitive and purgative qualities; and the Niter it self, nor its sulphury Spirit not being able to deprive it of its diaphoretick faculty, which manifests its self when the others appear to be annihilated.

But now to shew you the correction which I promis'd for Emetick Syrrup, which I describ'd in the second part of this work, grind upon a Porphyry to very fine powder twelve ounces of Glass of Antimony prepar'd as I have directed, then having mix'd with it three ounces and a half of powder of Niter, heat a Crucible red hot, cover'd with its Cover and plac'd upon a Culot in a proper Furnace, and throw into it by degrees little spoonfuls of the powder at a time, then cover the Crucible, and when the powder is red hot, take out the Crucible and let it cool; when it is cold, you shall find a mass or lump of a colour between yellow and black, which after you have powder'd very finely upon Porphyry, you must wash immediately with water only lukewarm, pouring it out by inclination afterwards, not letting it to stand at all in the Vessel, and dry the powder when it is sufficiently dulcify'd. Thus you shall have a Glass of Antimony corrected, the effects whereof will be much more gentle then before, and which you may safely make use of as well for the preparation of Emetick Syrrup, as for many other occasions, giving it infus'd in Wine from four or five to fifteen or twenty grains, ordering the dose according to the age and strength of the Patients.

You may also prepare Glasses of Antimony white, yellow, red, black, *&c.* by different calcinations of the Antimony, adding to it Borax, Sulphur, and other substances. But in regard the colour does not alter their vomitive and purgative qualities, and for that the preparation which I have here shew'd, may serve as an example for all, I thought it not convenient to swell this Chapter with additions little to the purpose.

CHAP.

CHAP. LXXV.

Of Saffrons *of* Antimony.

THis preparation is call'd by the name of *Crocus* or Saffron, becauſe of the yellow colour that dyes the lump, after it is pouder'd: and it is call'd *Saffron of Metals*, or *Crocus Metallorum*, becauſe Antimony is found near to the Mines of Metals, or by reaſon of the Sympathy it has with Metals: it is alſo call'd the *Liver*, by reaſon the Maſs is Liver colour'd before it is beaten. This preparation is common enough, though the method be various. For ſome after they have bruis'd and mix'd equal parts of Antimony and Niter, and put this mixture into a great Iron or Braſs Mortar, having careleſly cover'd the Mortar with ſome large Brick or Tile, heated before, put fire to rhe pouder, caſting into it a little Coal kindl'd, upon which enſues a Fulmination, and Fuſion of the ſubſtances; during which, the purer parts of the Antimony deſcend to the bottom of the Mortar, in the ſhape of the Liver, and the droſs remains at the top with the Saline fix'd part of the Niter, of which you may afterwards make ſeparation. Others putting leſs Niter by half then Antimony, but in all things elſe proceeding as before, find a Saffron at the bottom of the Mortar very little differing from the former, but more vomitive and in greater quantity: becauſe that there being leſs Niter, the particles of the Antimony were leſs agitated, and their diſſipation is leſs.

Others having mix'd equal parts of Antimony and Niter, and plac'd an Earthen pot fit to reſiſt the fire upon a Culot in the midſt of the fire-place of a proper Furnace, kindle a fire round about it, and having cover'd the pot, they make it red-hot, then having made up the pouder in little papers, they uncover the pot, and make projection by little and little, covering the pot again, cauſing every paper to fulminate one after another till all the powder be projected. Then they take the pot gently from the fire, and let it cool, and having ſeparated the Saffron from the droſs, they put it up for uſe. Others inſtead of ſeparating the Droſs, beat it together with the *Liver of Antimony*, then boiling the whole for ſome time in a good quantity of water, and filtring the decoction hot, they pour Vinegar diſtill'd upon the filter'd Liquor, and precipitate a very fine Saffron, which they waſh, dry and keep for uſe.

Others pouder and mingle equal parts of Antimony, Niter, and Bay-Salt decrepitated, and putting the mixture into a good Crucible, the half whereof muſt remain empty, they cover it with another Crucible of the ſame bigneſs, having a little hole in the bottom, and having well luted the cloſures of the Crucibles, and given the Lute time to dry, they place it upon a Culot in the midſt of a fire-place of a proper Furnace. Then having kindled a fire round about it, they leave the ſubſtances to detonate and melt: after which they take the Crucible from the fire; and when the Crucibles are cold, they break that which contains the matters, and find at the bottom the *Liver of Antimony*, the colour and pouder whereof are much more red then thoſe of the former, and cover'd with Salts, of which you muſt afterwards make ſeparation. The ſhape and colour of Marcaſite, which is very much like to that of Opal, is the reaſon why ſome have call'd this *Liver of Antimony* by the name of *Magneſia Opalina*, believing it to be the true *Crocus Metallorum* of *Rulandus*. True it is that this is the faireſt and beſt preparation of Antimony that can be prepar'd, as well to make Emetick-wine, as to give in pouder from eight, or ten, to twenty, thirty, or forty grains, in ſome conſerve, or an Egg, a roſted Apple, or otherwiſe. It is very ſerviceable in Colliriums, reduc'd into very fine powder and infus'd or diſſolv'd in Ophthalmick Waters.

Liver of Antimony purges upward and downwards all bad humours that it meets with. This Liver alſo conſiſting of the groſſer parts of Antimony, has ſome appearance of Glaſs, but nothing ſo tranſparent nor altogether ſo hard. The Groſſer parts remaining in the Lump, ſerve to bridle the activity of the more pure parts; and therefore this powder is given in a much greater doſe then the Glaſs.

CHAP.

CHAP. LXXVI.

Of Regulus *of* Antimony.

THE name of Regulus, or Petty King, ſeems to have been very unadviſedly given to Antimony thus prepared, conſidering that inſtead of being ſuperiour to the other parts like Kings; it is ſtill below them, and falls to the bottom of the Crucible or other Veſſels after the Antimony is melted with ſubſtances capable to ſeparate the pure parts from the impure. But the weight and cloſeneſs of its pureſt parts, cauſing them to precipitate to the bottom, where they find themſelves concenter'd in leſs room then the droſs, which remains above mix'd with the Salts; and the perfection of the ſame parts has acquir'd it the name of Regulus, which is attributed alſo to other Metals purify'd and melted.

Niter and Tartar are the uſual Metals mix'd with Antimony. But every one orders the quantity as he pleaſes. For ſome mix equal parts of Niter, Tartar and Antimony. Some to one part of Niter and one part of Tartar, add two parts, of Antimony. Others put more Niter then Tartar, others more Tartar then Niter. Some mix pouder'd Coal. And ſome there are who having beaten and *detonated* together equal parts of Tartar and Niter, and having repouder'd the Maſs, mix ſometimes leſs, ſometimes more of it with the Antimony in pouder, and melting this mixture in a Crucible, draw forth the Regulus. But though we may extract a Regulus by any of theſe ways, I will here ſhew you the quantities the Method which I have made uſe of, and which have ſucceeded with moſt advantage for the preparation.

Place a good Crucible upon a Culot in the middle of the fire place of a Wind-Furnace, and having cover'd it, and kindl'd a good fire round about it, get ready two pound of Pouder of Antimony, a pound and a half of Tartar of *Montpelier*, and three quarters of a pound of Niter beaten to pouder alſo, and having well mix'd them, fill two little Cornets of Paper with the pouder, containing each two ounces. Then when the Crucible is red hot, uncover it, and throw in one of the Cornets, covering it at the ſame time, and leaving the pouder to make detonation; when that detonation is over, caſt into the Crucible another Cornet, and let it fulminate like the former, continuing Prejection and Detonation, and to cover the Crucible, till all the pouder is projected. Then caſting in about an ounce of powder of Niter upon the Ingredients, and having well mix'd them together with a long Iron-Rod, cover the Crucible and force the fire. And when the ſubſtances are well melted, take the Crucible out of the fire with a pair of Tongs; and when it is cold you ſhall find the Regulus at the bottom: or elſe having taken the Crucible off the fire, pour the ſubſtances into an Iron Antimonial Horn heated and greas'd withinſide, knocking the at the horn ſame time, that the Regulus may the better ſink to the bottom. Then when the Matters are half cold, turning the Horn upſide-down, you ſhall find the Regulus which was at the bottom under the droſs, and having ſeparated with two or three blows of a Hammer, and well waſh'd it. you ſhall find it white, ſhining, and alſo as it were full of Starrs, if you have proceeded right in the operations, and melted the ſubſtances well at laſt. Afterwards you may remelt this Regulus in a leſſer Crucible, and throw upon it a little good pouder of Niter to make it more pure; then caſting it into fit Moulds, you may make Goblets which are call'd *Chymical*; or elſe Pills which are call'd *Perpetual*; of which you may give one at a time to ſtrong Conſtitutions, to purge according to the diſpoſition of the humours, ſome times upward, but never failing downward; ſearching afterwards for the Pill, and waſhing it, to ſerve as often as need requires, where the Patient has no averſion to it. As for the Goblets, or Cups, they may be fill'd with *Spaniſh*-Wine, or other Wine, or any other Liquor, and leaving them cover'd with a Trencher from night till morning, the Liquor may be given to ſtrong Conſtitutions that deſire to purge upward and downward. And theſe Goblets or Cups will communicate their Purgative and Emetick quality, as long as you ſhall deſire without any ſenſible diminution of their weight, or manifeſt change of their ſubſtance.

Regulus of Antimony is very ſeldom given alone in powder, it being ſufficient to make Bowles or Cups of it; but it is often mix'd with other Minerals or Metallick ſubſtances in order to many other Chymical preparations, of which I have already ſhew'd ſome, and ſhall ſhew more examples.

You may powder the droſs of Regulus, and having boil'd it for ſome time in a good quantity of water, filter the decoction, then having pour'd upon it Vinegar diſtill'd, precipitate a yellow ſubſtance, which is call'd *Golden Sulphur of Antimony*, to which ſome have allow'd only a diaphoretick vertue, though it chiefly work by vomit and by ſtool. You may afterwards dulcifie this precipitate in ſeveral Lotions, dry it, and give it from three or four to five or ſix grains, mix'd with ſome other medicine adapted to its operation. But the uſe of it is rare, and the yellow ſtains that remain in the hands of them that prepare it, make them unwilling to take the trouble upon them.

CHAP. LXXVII.

Of Martial Regulus.

THE mixture of the pure ſubſtance of Mars, with Regulus of Antimony, has given this Regulus the name of Martial, the preparation whereof is thus: Heat red hot in a Coal-fire a good Crucible well cover'd, then throwing into it half a pound of the points of Horſeſhoe-nails, return the Cover upon the Crucible, and increaſe and continue the fire till the red hot nails look white again; then caſt upon them a pound of Antimony in powder, which melting ſoon after, will cauſe the Iron alſo to melt, keeping the Crucible cover'd, and forcing the fire. When the ſubſtances are melted, caſt upon them at ſeveral times, about three or four ounces in all of Niter in powder, as well to ſeparate the droſs of the Iron and Antimony, as to make the fuſion more clear. Then having heated and greas'd an Antimonial Cornute or Horn within ſide, pour the melted ſubſtances into it, knocking the ſides of the Horn, to make all the Regulus deſcend to the bottom, and when the whole is cold, turn the Horn an end, and you ſhall find the Regulus cover'd with the droſs, which you muſt ſeparate with a hammer. After which having cleans'd it and remelted it in a Crucible, caſt upon it three ounces of Antimony in powder, forcing the fire that they may be all well melted together; afterwards having added by degrees about two or three ounces of powder of Niter to ſeparate the remaining Scories of Mars, and to haſten and clarifie the fuſion of the Metals, pour them into an Iron Horn heated and greas'd within, proceeding in all things as before, and by this means you ſhall have a Martial Regulus clean and ſtarry, provided you have been exact in the operation, and that the ſubſtances be perfectly well melted when you pour them into the Horn, upon which miſtake you muſt remelt the Regulus, and add to it two or three ounces of Niter more, the better to refine it.

The Antimony us'd in this preparation affords, proportionable to its quantity much more Regulus then in the former, becauſe not only the Mars hinders the diſſipation, which would otherwiſe happen of ſeveral particles of Antimony, but alſo augments its quantity by joining with it its own pure parts in the fuſion; beſides the Niter cannot make ſo great a diſſipation as in the preceding Regulus, becauſe it is here us'd more late, and for that it is mix'd but by degrees, and in a ſmall quantity. Though ſhould you continue to mix it, it might at length conſume all the Mars, and change the qualities of the Antimony, rendring it diaphoretick.

You may make Cups and Bowles of this Regulus, as of the former, and their effects are much the ſame, but they are leſs violent becauſe of the addition of Mars with the Regulus of Antimony, which would at length reduce the Mars all into droſs, were they kept long together upon the fire.

Some prepare a Regulus without the addition of Salts: They beat the Antimony into groſs powder, and having put it into a Crucible, and cover'd it with powder of Coal four or five fingers high, they expoſe it to a melting fire for half an hour,

hour, then the ſubſtances being cold, they find at the bottom a Regulus ſeparated from the droſs, which they afterwards put into a new Crucible, and having cover'd it with more powder of Coal, and expos'd it to a melting fire for a quarter of an hour, they ſtill draw forth more Regulus, and putting the Scories a third time into another Crucible with more new powder of Coals, they melt them again to extract a third Regulus. And thus out of a pound of Antimony they draw out about three quarters of Regulus. But the Regulus thus extracted is very impure, and full of ſeveral groſs parts of the Antimony; for it has neither the whiteneſs, luſtre, nor beauty of a Regulus well prepar'd; only it may be accounted an Antimony a little purer then ordinary.

CHAP. LXXVIII.

Of Flowers *of* Antimony.

VArious inſtruments are us'd, and various methods follow'd for the preparation of Antimony; for you may make uſe of ordinary Aludels, cover'd with their Pots bor'd through above and below; of which the uppermoſt hole of the uppermoſt pot muſt be very little; and having plac'd the Aludel in a proper Furnace, and made the bottom of it almoſt red hot, project by degrees into the body of the Aludel through its hole, powder of Antimony, and having ſtopp'd the whole, cauſe the flowers to riſe into the pots of the Aludel, continuing the fire and projection of the powder of Antimony, till you have flowers enough. You may alſo, following *Zwelfers* way, make uſe of an Aludel made almoſt like a Bowl, having two pipes, one of each ſide of the middle, and the lower part ſomewhat more flatted then the upper. Then put a little powder of Antimony into it, place the the Aludel in a proper Furnace, and kindle under the Aludel a fire ſufficient to melt the Antimony; which done, ſlightly fit to one of the Pipes of the Aludel a Recipient having a little hole in the hinder part, and when the vapours begin to appear in the Recipient, blow gently with a ſmall pair of Bellows into the oppoſite pipe to that fitted to the Recipient, to the end that the vapours being forc'd into the Recipient may condenſe there in flowers. But for as much as the Antimony alone does not freely afford its flowers, unleſs you be very exact to govern the fire, and in managing the powder, you ſhall have better ſucceſs by mingling forraign ſubſtances with the Antimony, as well to divide its parts and hinder their melting in the Aludel, as to make the particles aſcend in flowers; to which purpoſe the firſt Aludel is more proper then the laſt.

You may mix the Antimony with double its weight in Sand or powder of Glaſs, and having plac'd the Aludel in a proper Furnace, and cover'd it with its pots luted one above another, make the lower part of the Aludel red hot, and project about half an ounce of the powder at a time into the hole, ſtopping it at the ſame time, continuing always a good fire under the Aludel, and continuing to project the pouder till it be all ſpent. You may alſo very properly, inſtead of Sand or pouder of Glaſs mix with Antimony in pouder, treble its weight of Niter in powder likewiſe, and project and fulminate the powder by little parcels in the Aludel cover'd with two or three pots, and the uppermoſt with a Glaſs head, not luted, fitted with a Recipient; and by this means cauſe the moſt volatile parts of the Antimony to aſcend in Flowers, which you ſhall find in the pots or in the head when the Veſſels are cold and unluted. You ſhall find in the Recipient at the ſame time a Spirit of Niter very acid, & at the bottom of the Aludel the moſt fix'd part of the Antimony, mix'd with the fix'd Salt part of the Niter. Then dulcify the flowers by ſeveral Lotions, afterwards dry them and keep them, to be given from three or four to five or ſix grains in ſome Conſerve or Sweetmeat, when you would purge upward & downward evil humours, in intermitting Agues, Hypochondriacal Maladies, and other obſtinate diſeaſes. The Spirit in the Recipient is very uſeful againſt Colicks and difficulties of Urine, given from five or ſix to twelve or fifteen drops, or to a pleaſing acidity in Broths or other Liquors proper to be given. As for that which remains at the bottom of the Aludel, being a real

Diaphoretick *Antimony*, having taken it out of the Veſſel, cleanſe it from the Salt part of the Niter, and uſe it for the ſame uſes as the ordinary Diaphoretick Antimony.

You may mingle very properly half a pound of powder of Antimony with a pound of Sal-Ammoniack, put them together into an Earthen Cucurbit fit to reſiſt the fire. Then having plac'd the Cucurbit in a proper Furnace, and cover'd it with a Glaſs-head, ſublimate the Flowers with a Gradual fire, and when the Veſſels are cold, ſcrape off the red Flowers from the head; Dulcify them with ſeveral Lotions, dry them and keep them for the ſame Uſes as thoſe which precede.

You may alſo make uſe of Glaſſes, Saffrons and Regulus's of Antimony to extract, proceeding after the ſame manner as with raw Antimony. The diverſity that happens to Flowers of Antimony in ſeveral, or the ſame preparations, or in the ſame Sublimations, not changing their vomitive and purgative qualities, you may make uſe of all alike, red, yellow, or white, provided they be well waſh'd and dulcify'd. Sometimes a grain of theſe Flowers is mix'd among other Purgatives, or with Mercurius Dulcis upon certain occaſion. For then ſerving as a Spur to the remedies among which it is mix'd, it aſſiſts their activity, working only downwards. Mercurius Dulcis is alſo a good Corrective of *Antimony*. I omit the Correction of theſe Flowers by Salt-Tartar well impregnated with the acid of the Spirit of Vinegar, or by the Cohobation of Spirit of Wine arromatiz'd, or by the of Spirit of Wine mollify'd, or by other ways ſet down in *Authors*, not ſeeing any neceſſity to inſert them here, ſince you may upon the place correct and change the activity of the Flowers by mixing them with other Medicines.

CHAP *LXXIX.*

Of Diaphoretick Antimony.

THE moſt part of Authors agree that there muſt be three parts of Niter for one of Antimony put for this preparation. But ſome would have all the Niter mix'd at once with the Antimony; others but two parts; others but one part, adding ſucceſſively the other two to the Maſs. But though the event of all theſe preparations does not much differ, provided that making uſe of three times the weight of the Antimony in Niter, you proceed in all things as you ought to do; nevertheleſs I think it much better not to mix at the beginning above a third part of the Niter with all the Antimony; for if you make uſe of all the Niter, the *Fulmination* being much more violent, makes a greater diſſipation of the Antimony, and alſo of the volatile parts of the Niter, which have not time to contribute their part, to fix the reſt of the Antimony remaining in the Crucible. Whereas if you put in no more Niter then Antimony, the Fulmination being violent enough, to raiſe the Groſs Sulphur of the Antimony, though not able to diſſipate the volatile parts, and that adding after to theſe parts of the Antimony, and not cauſing any more fulmination, becauſe the impure part of the Antimony is conſum'd, the Spiritous and fix'd parts of the Niter have all the time requir'd to act upon the *Antimony*, and to change the vomitive and purgative qualities into Diaphoretick; which is a quality as it were inſeparable from this Mineral.

Break then to powder and mix a pound of good *Antimony* with a pound of Niter well purify'd, and put the pouder into Cornets of Paper containing about an ounce each. Then having plac'd a good Crucible with its cover upon a Culot in the midſt of a Fire-place of a Wind Furnace, kindled a good Coal-fire round about, and made the Crucible red-hot, throw in firſt one of the Cornets, covering the Crucible at the ſame time, and leaving the pouder to Fulminate. After which project one Cornet after another, and to leave them to Fulminate till the whole is projected, continuing always a good fire to keep the ſubſtances in Fuſion. Then add by degrees and at ſeveral times all the reſt of the Niter, which you muſt mingle and incorporate with the Maſs, ſtirring it with a long Iron-Spatula, and keeping ſtill a good

good fire for two or three hours, or till the Antimony and the Niter have loſt their Fluidity, and are, reduc'd in the Crucible into a white and ſolid Maſs. After which when the Veſſels are cold, and that you have taken away all the filth that ſticks about, or in the Crucible, break the ſubſtances with a hammer into four pieces, and having put them into a longTin Platter, pour upon them the boiling water, till they are quite cover'd over, and there let them lye and ſoak till the Maſs be ſeparated from the Crucible, and in part ſoften'd. Then throwing away the pieces of the Crucible, let the matters ſettle, pour out the Liquor by Inclination, and keep it apart. Then put the Calx of *Antimony* into a Marble Mortar, and bruiſe it with a woodden peſtle: after that having pour'd upon it ſome pints of Water, and well ſtirr'd, pour the thick Liquor preſently by Inclination into a clean Earthen pot, continuing afterwards to beat and ſoften the Calx of Antimony in clean water, and ſtill to pour out the thick water as before, till this lime be all ſoften'd in the water, and that you perceive nothing but ſome uſeleſs Terreſtreties at the bottom of the Mortar. Then waſh this lime with many Waters, till it be perfectly Dulcify'd, and having well dryed it, put it into a Crucible, and hold it over the fire for two or three hours; and having burnt over it good Spirit of Wine, keep it in a pot or in a double glaſs bottle for uſe.

The firſt Liquor Sand, is of good advantage, containing in it much of Niter, and ſeveral particles of the Calx of *Antimony* which the ſame Niter has diſſolv'd; for you may evaporate it to a film, and draw from it Cryſtals of Niter impregnated with the *Antimony*. Or elſe pouring Spirit of Vinegar upon the Liquor, precipitate a Magiſtery very white and very ſlender, which proceeding from the ſame Maſs is endu'd with the ſame vertues; and you may make uſe of it as of the Calx of *Antimony*, having well waſh'd and dry'd it. The whiteneſs of the Calx of *Antimony* is the reaſon that they have given it the name *Ceruſe*: but it is more commonly call'd *Diaphoretick Antimony*, or Mineral Diaphoretick. *And* that becauſe that while it fortifyes nature, it diſpoſes it, to expel the ill humours by all ſorts of ways, and chiefly by ſweat or inſenſible tranſpiration. It is alſo very proper to mortify Corroſive Salts, eſpecially acids, and to prevent fermentation of the humours, the corruption whereof it alſo hinders. It cleanſes the whole Maſs of the blood, and gives wonderful relief in Scorbutick Maladies, if you continue the uſe of it for ſome time. And though it may ſeem aſtringent, as well in regard of its ſubſtance altogether terreſtrial, and becauſe it is diſabl'd from purging either upwards or downwards, nevertheleſs it is mix'd very appoſitely with purgative and opening Medicines. For by aſſiſting their activity, it hinders the bad Impreſſions which they might make upon the parts. For which cauſe it is often mix'd with remedies preſcrib'd to open obſtructions of the bowels and Matrix. It is very much eſteem'd againſt the Malignity of Fevers, particularly againſt the ſmall Pox, and all ſorts of Meazles, as alſo in the cure of Venereal diſtempers, mixing it with all Remedies made uſe of for that purpoſe as well purgative as Diaphoretick. It is given to all ſorts of Sexes and ages, from five or ſix to twenty or thirty grains, as alſo the Magiſtery mention'd, either alone or mix'd with other Remedies.

You may diſſolve the Cryſtals drawn from the firſt Lotion of Antimony Diaphoretick in proper Liquors, and give them from five or ſix to fifteen or twenty grains, for the ſame Maladies, as Diaphoretick Antimony.

You may make uſe of the Glaſſes, Saffrons Regulus's and Flowers, inſtead of ordinary Antimony, and fixing their vomitive and purgative qualities, render them Diaphoretick, adding to them three times as much the weight of fair Niter, and obſerving the ſame directions as for Diaphoretick Antimony.

CHAP. LXXX.

Of the Icy Liquor of Antimony.

FOR this preparation usually they take equal parts of good Antimony and Corrosive Sublimate, and having beaten them in a Mortar, and put them into a Glass Retort well luted about, and having a large neck, place it in a close Furnace of Reverberation proportionable to its bigness: then having kindl'd a very small fire in the fire-hearth of the Furnace, and slightly fitted a half *Ballon* to the neck of the Cornute, begin your Distillation with a very soft fire, and in a little time you shall perceive a very white Liquor drop into the Recipient, clear also, but very heavy, which will coagulate immediately in the form of Ice. You must not increase the fire till all the clear Liquor be distill'd; and if it happen that any of the distill'd Liquor congeal in the neck of the Retort, you must force it to melt and fall into the Recipient, by holding a lighted Coal, and giving a gentle heat to the place where it lyes. But when you perceive any blackness to appear in the neck of the Cornute, or of the half *Balon*, slightly fit a new Recipient to the beak of the Retort, and begin to augment the fire, which you shall force by little and little, and by degree from degree, till you come at length to continue it very fierce, to separate from the substances that remain in the Cornute, the *Mercury* conceal'd in the Sublimate, and to cause it to ascend with the proper Sulphur of Antimony, and stay almost all like Cinnabar, in the neck of the Retort, and sometime after to distil in flowing Quick-silver into the Recipient, mix'd with some Fuliginous parts of the Antimony.

The Vessels being cold, you shall find at the bottom of the Cornute a hard shining Mass, very much like the Antimony made use of in this operation, and at the same time at the top and in the neck of the Cornute, the Quick-silver of the Sublimate united with the terrestrial Sulphur of the Antimony and incorporated with it in Cinnabar. You shall also find in the last Recipient some little Quick-silver reviv'd, mingl'd with some Soot of *Antimony*, and in the first the Icy Liquor; which will have no need of Rectification; if the fire were well govern'd, and the Recipient chang'd in good time. But if there be any Clouds or obscurities in it, you must cause it to melt again by heating the Recipient by little and little, and having pour'd it into a small Glass Cornute, rectify them in a Sand-bath with a very gentle fire, till all that obscure matter which was in the Cornute become a white and very pure Liquor, which is call'd the Gummy liquid Butter, or Icy oil of *Antimony*.

The ordinary Regulus of *Antimony*, or the Martial Regulus may be made use of in this preparation, and double the weight of it in Sublimate-Corrosive added to it, and observing the same Rules as for the preceding distillation, a Liquor may be obtain'd very like the former, and by some better esteem'd because of the Refindness of the Regulus from whence it was drawn. But the difference is not very considerable, because the acid Salts of the Corrosive Sublimate, do not principally act but upon the *Regulous* part of the *Antimony*, and by consequence, the Liquor which distills from it, cannot but be very near in likeness to it. So that the best way will be to keep to the first Preparation, considering that besides that the Regulus costs more then the ordinary *Antimony*, you must employ double its weight of Sublimate, and that afterwards you cannot extract a Cinnabar, as you may, making use of Raw *Antimony*.

We may say that among Minerals *Antimony* is that which furnishes Chymistry with the greatest number of preparations; we may also affirm as well, that the Distillation of Butter of *Antimony*, is as it were the Source of a good number of preparations; and therefore it deserves that we should make some Reflexions upon it, to the end we may understand the reason of all the changes that happen to *Antimony*.

In the first place we must believe, that the Acid part of Vitriol and Bay-salt, which make one part of the Substance of Corrosive Sublimate, are the Dissolvers and the Melters of the Reguline part of Antimony and that they are united with it in Distillation. We are to understand also that the Mercury has no part in the dissolution, be-

cause

cauſe we may have an Icy liquor of Antimony, by diſtilling this liquor through a Retort, and mixing it before with its weight of Vitriol calcin'd white, and as much decrepitated Salt in powder; that a liquor of the ſame nature may be had, by drawing a Spirit from equal parts of decrepitated Salt, and Vitriol calcin'd white, and mixing two pints of this Spirit with a pound and a half of powder of Antimony, and diſtilling them through a Cornute in a Sand-bath; and that you may yet be more ſucceſsful, by mingling two parts of ordinary water with one part of powder of Antimony, and diſtilling them together, without ever having mix'd any Sublimate Corroſive, or any Quickſilver in any of theſe diſtillations.

In the ſecond place, though the powder ſeparated from this Icy liquor after precipitation, waſhing, and drying, be call'd *Mercury of Life*, it is not to be thought, that the Quickſilver, which makes the greateſt part of the Sublimate Corroſive, mix'd equally with the Antimony is the ground of it, or that it makes one part of it; if the fire were govern'd right at the time of the diſtillation, or if by forcing the fire the reviv'd Quickſilver be not forc'd to deſcend into the Recipient.

But having proceeded right, certain it is, that the whole ſubſtance of the liquor conſiſts only of the acid parts of Vitriol and Bay-Salt, and the *Regulous* part of the Antimony, which the acid parts of thoſe Salts have diſſolv'd, which is every way demonſtrable; whether it be by converting into a true *Regulus*, or Glaſs, the Antimonial ſubſtance conceal'd in the liquor; or by drawing from the maſs remaining in the Retort, all the Quickſilver of the Sublimate Corroſive, converted into Cinnabar and reviv'd; or whether by diſſolving in water the acid part of Vitriol and Bay-Salt contain'd in the liquor, and ſeparating it from the ſubſtance Antimonial.

In the third place we muſt conſider, that the heat of the fire, giving a kind of fuſion to the Sublimate, and by that means an opportunity to the Mercury to reſume its firſt form, and eaſily converting into liquor the acid part of the Salts, which were confuſedly mix'd with the parts of the Mercury, after they had divided them at the time of the ſublimation; the ſame liquor, finding the *Reguline* ſubſtance of the Antimony more fit for penetration of its points, faſtens upon it, divides its parts, diſſolves them, and makes a calcination thereof, which may be call'd *Immerſive*; and afterwards being forc'd by the fire, it comes forth in liquor at the beak of the Retort, with the ſubſtance which it had diſſolv'd and calcin'd, falling with it drop by drop into the Recipient, and leaving in the Retort the Mercury with the groſſer part of the Antimony. And becauſe the natural combuſtible Sulphur of the Antimony reſides then in the Cornute with the other groſs parts of the Antimony, they ſublime together, and you find them after diſtillation incorporated with the Cinnabar in the neck of the Cornute; not but that there is ſome of the flowing Mercury to be found in the Recipient, becauſe there was not Sulphur of Antimony enough to ſtop it. For the ſame reaſon there is no expectation of Cinnabar, when Regulus or Glaſs is made uſe of for the preparing of Icy liquor; for then being depriv'd of all their terreſtrial Sulphur, the Mercury not finding any ſubſtance proper to fix to, is conſtrain'd by the fire to quit the Cornute in the ſame form before it was ſublim'd.

Cinnabar of Antimony is not only of great efficacy in the cure of Venereal diſtempers; but the beſt Authors look upon it as a very particular remedy againſt the Epilepſie, giving it from ten or twelve, to fifteen or twenty grains in Bolus among other Cephalick remedies.

As for the Icy liquor, in regard it is very cauſtick, while it is ſo, it is only for external uſes, as well to cauterize and eat off ſuperfluities of the fleſh, conſume and take away the rottenneſs of the bones, as to ſtop Gangrenes. But becauſe the violence of its effects require great warineſs, *Monſieur D'Aquin* was deſirous that I ſhould impart to publick view, how *Monſieur Pelegrine*, Phyſitian at *Romans* in the Dauphinate, makes uſe of this liquor with good ſucceſs upon ſeveral occaſions, and in many experiments made before *Monſieur D' Aquin*, of many of which I my ſelf was a witneſs.

CHAP.

CHAP. LXXXI.

How Monſieur Pelegrin *uſes the Icy Liquor of* Antimony, *and the various effects which may be expected from it.*

MIngle an ounce of Icy Liquor of Antimony with two ounces of Oil of Sulphur diſtill'd by the Bell, and keep them together in a Bottle by itſelf.

Mix in an Earthen pot varniſh'd within an ounce of Icy Liquor of Antimony with two ounces of Corroſſve Sublimate in powder, ſtirring them with a woodd'n Spatula, and after you have waſh'd them ten or twelve hours in that condition, evaporate the ſuperfluous moiſture with a gentle heat, to the dryneſs of the powder, and keep it in a double glaſs bottle cloſe ſtopp'd.

To ſtop aGangrene at the beginning,firſtScarify theGangren'd part to the quick,then apply the Liquor or the powder between the live and the dead fleſh, putting in more or leſs according to the condition of the ſource, letting it lye ten or twelve hours. But if the pains be too vehement, before the time is expir'd, apply the ſuppera-ting and pain-eaſing Ointment, hereafter preſcrib'd: then continue the application twice a day, as well to ſeparate the Scab from the live fleſh, as to incarnate and cicatrize the wound afterwards: for which purpoſe at length apply rolls of Lint dry, and over them a Cere-cloth of Diapalma Ceruſe and Minion diſſolv'd in Oil of Roſes.

For the preparation of the Suppurative and Anodine Ointment, take Oil of Roſes, Lillies and flowers of Elder of each two ounces, Mutton nnd Veal ſuet of each half a pound, powder of Myrrh and Olibanum of each an ounce and an half, one pound of black pitch, half a pound of clear Turpentine, ſix ounces of yellow wax, two ounces of diſtill'd oil of Roſemary, and as much oil of Lavender, and make an Ointment according to Art.

To heal Ulcers that cauſe rottenneſs of the bones, anoint their edges with the Liquor above deſcrib'd, and pour upon the Rotten bone at the bottom of the Ulcer ſome drops of it, pouring on more or leſs according to the largeneſs of the Rotten place; then cover the Ulcer with Rolls of white dry'd Linnen, and let them lye ſo ten or twelve hours. After which, having taken off the Rolls, put on others anointed with the Anodine Oinment, but lay nothing upon the bones, but the dry Rolls, and when the Scab is parted from the live fleſh, having ſcrap'd the bone with a proper Inſtrument, and having taken away all the brok'n ſplinters, fill the whole Ulcer with dry and warm Rolls, renewing them twice, a day leaving upon them the Divine Emplaſter ſoften'd with Oil of Turpentine, and ſo continuing to the end of the Cure.

To extirpate Fiſtula's, thruſt into the pipe of the Fiſtula a pipe dipt in this Liquor, but if you cannot get in a tent, put in never ſo ſmall a drop with the end of a ſmall Syringe, then having cover'd the part with a fold of Linnen, leave it ſo all the day. After that draw forth the Tent, and dreſs the Fiſtula twice a day with the *A*nodine Oinment, till it be well incarnated, applying at the end a drying Cere-cloth.

To heal Cankers at the beginning, make an Inciſion like a Croſs to the bottom of the hardneſs, and pour upon it four or five drops of this Liquor: afterwards cover the Canker with dry Rolls and folded Linnen, and let the patient keep his bed twenty four hours,giving him only Broths for nouriſhment. After which take off the Rolls, and put others in their room. Then dreſs the wound twice a day, and continue dreſſing till the Scab being fallen off, and the wound incarnated, it may be time to lay on the deſiccating Cere-cloth. If the Cancer be ulcerated, cut off nothing but the hard and black blew brims of the Cancer, and drop ſome drops of the Liquor upon the Scarify'd part to take away the hardneſs; and drop more of the Liquor upon it if there were not enough at firſt.

The ſame Method is to be obſerv'd for the cure of Wolfes.

To

To take away Warts, Wens, and other excreſcences againſt nature, dip a ſilk-ſtring in the liquor, and tie it about the excreſcence, if it may be done, and leave it ſo ty'd for twelve hours, till the excreſcence fall off of it ſelf, then apply a deſiccative Cerecloth upon it; but if you cannot come at the excreſcence to tye it, touch it with the end of a ſyringe dipp'd in the liquor, and put upon the top of it a little of the powder, covering the part with a dry fold of linnen, which muſt be chang'd twice a day till the excreſcence be fallen off, and then applying a deſiccative Cerecloth to it.

To heal cancerous, venereal Ulcers; moiſten the end of a ſyringe with a little ſpittle, and having put a little powder upon it, touch the cancerous Ulcer with it, though there were a rottenneſs of the bone beſides; then cover the ſore with dry linnen folds, and leave it ſo for a whole day. But if the Patient cannot endure the pain, take off the dry linnen folds, and lay in their places others ſpread with the Anodyne ointment. Then dreſs the ſore twice a day with the ointment, till the ſcab be fallen off, then apply only folded linnen and little pillows upon them. If there be any inflammation, lay *Gater*'s Cerecloth to it. But the uſe of this remedy does not hinder, but that you may uſe general Medecines to carry off the cauſe of the diſtemper.

CHAP. LXXXII.

Of the Emetick Powder, Philoſophical Spirit of Vitriol *and Mineral* Bezoar.

THE cauſtick quality of the icy liquor of Antimony proceeding only from the acid part of the Vitriol and Salt Marine conceal'd in the ſublimate corroſive made uſe of in the preparation of this liquor, and that part being to be diſſolv'd in water, it is no hard thing to ſeparate it, nor neceſſary to make uſe of precipitants to make the reguline ſubſtance of the Antimony deſcend to the bottom, which being the principal part of the liquor, is not diſſolvable in water like the Salts; in regard that by ſteeping the acids in a good quantity of water, they become ſo far weaken'd, that they are conſtrain'd to quit the Antimonial part which they had diſſolv'd and reduc'd to liquor. And therefore becauſe there is more uſe to be made of the Emetick, Purgative, and Diaphoretick qualities of the Antimonial part of this liquor, then of the corroſive of the acid Salts which keep the Antimony in diſſolution, it is neceſſary to know how to ſeparate them.

Melt in a *Balneum Mariæ* luke-warm the icy liquor of Antimony mention'd, which ſhall be found in the Recipient, and having put it into a clean earthen-pot glaz'd within, pour upon it twelve times the weight of fair water luke-warm and filter'd; the mixture whereof will make a very white milk, then having well ſoak'd and ſtirr'd the ſubſtances with a wooden Spatula, let them ſettle for two or three hours. After which pour out by inclination the clear liquor, and preſerve it in a bottle: waſh the Antimonial ſubſtance that lies at the bottom with ſeveral fair waters, till it be perfectly dulcifi'd. Then dry it in the ſhade, and having powder'd it in a glaſs or marble Mortar, put it in a double glaſs-bottle cloſe ſtopp'd.

This Powder bears the name of *Algarozt*, the Author of it, or of *Emetick*, for its effects, and of *Mercury* of life, though vainly, for the reaſons already alledged.

The principal qualities of it are to purge vigorouſly upwards and downwards all bad humors, giving it in Bolus from two or three to five or ſix grains or more, in ſome conſerve, or in ſome other proper matter, or mixing it with other purgatives, and accommodating it to their nature. It is made uſe of very advantageouſly in Dropſies, in intermitting Fevers, and in all diſeaſes of the ſtomach and matrix, which proceed from abundance of humors.

The firſt liquor, which you ſhall have receiv'd, containing in it the acid part of the Glacial Oil, is of a very acid ſavour. But its acidity will much encreaſe, if you

cauſe the liquor to concenter in a Sand-Bath, by which means you ſhall have that which writers call the ſpirit of Vitriol Philoſophick, evaporating the greateſt part of the moiſture: as well by reaſon of the acid part of the Vitriol, which is its principal ſubſtance, as alſo for that it has almoſt the taſte and qualities. For which reaſon it is giv'n inwardly, as the ordinary ſpirit of Vitriol; this ſpirit being a friend of nature, whereas the acids whereof it is compos'd, were deſtructive to it, ſo long as they were concenter'd with the reguline part of the Antimony.

The effects of Emetick powder may be qualifi'd, and ſo order'd, that they may only purge by ſtool, by putting it into a ſmall Glaſs-Cucurbit, and placing it in a Sand-Bath over a very gentle fire. Then leave it there till it begins to grow red, and pour upon it, two or three times, ſpirit of Wine well rectifi'd, and draw it off as many times. This powder may be given to the ſame doſe as the ordinary Emetick, and is call'd Emetick corrected.

But to deprive this powder abſolutely of its purging faculty either upwards or downwards, and to change it into Diaphoretick, proceed thus. Put the quantity of powder you intend into a ſmall Glaſs-Cucurbit plac'd in a Sand-Bath, and having pour'd upon it three times as much the weight of ſpirit of Niter, ſtirr'd it with a wooden Spatula, and ſteep'd it well in the ſpirit, evaporate all the moiſture, till there remain only a white dry maſs at the bottom of the Cucurbit. Then having waſh'd and perfectly dulcifi'd it, keep the powder in a glaſs-bottel perfectly well ſtopp'd. This powder bears the name of *Bezoar Mineral*, as well for its Bezoardick qualities, as for that the ſubſtance of it is altogether mineral. This Bezoar is given to good purpoſe in all diſeaſes where the Bezoar drawn from the Animal is ordinarily us'd. It ſtrengthens very much all the noble parts, and defends them againſt poiſon. It purifies the maſs of the blood, and drives from thence, as well as out of the whole habit of the body all thoſe ſharp ſeroſities that are proper to be expell'd through the pores of the body, driving them forth by ſweat or by inſenſible tranſpiration. For which reaſon it is very highly commended againſt all diſeaſes proceeding from corruption or depravation of the blood, chiefly in the Scurvy, the Peſtilence, the Small-Pox, the Meazels, and all ſorts of Epidemick diſtempers. The weight of it cauſing it to deſcend to the bottom of the liquors, is the reaſon that it is only given in Bolus, from eight or ten, to twenty or thirty grains, mix'd with conſerve, or ſome other proper matter. It may be mingl'd with Purgatives and Aperatives to fortify the noble parts during their operation.

CHAP. LXXXIII.

Of Sulphur of Antimony.

THis Sulphur is not to be taken for that Sulphur which is look'd upon as one of the Principles of Antimony, and which being ſtrictly united with its moſt pure parts, is as it were inſeparable from it. I only intend to ſhew the extraction of the terreſtrial and combuſtible ſulphur of Antimony, which often appears in a blue flame, chiefly when you calcine the powder of Antimony for the preparation of Glaſs; or which is incorporated with extraneous ſubſtances, when after the diſtillation of the Glacial Oil of Antimony you ſublime the Mercury in Cinnabar, and that the combuſtible ſulphur of Antimony is united with it. The impoſſibility of making any advantage of Sulphur that burns during the calcination of the powder of Antimony, prevents my attempting it; but the ſulphur contain'd in the Cinnabar of Antimony, engages me to ſet down the way to ſeparate it to good profit: though there are other ways to ſeparate a pure ſulphur of raw Antimony, eſpecially being in the ſame condition as it was in the mine.

Make a ſtrong lye with good wood-aſhes, quick-lime, and aſhes made of the burnt lees of Wine, and put into a glaz'd earthen-pot a pound of Cinnabar in powder; fill the pot almoſt full of this lye, and boyl the whole for three or four hours, pouring from time to time new lye into the pot in the place of that which is conſum'd. Then having filter'd the hot liquor, and ſav'd the reviv'd Mercury which will

will lie at the bottom, you may, if you pleaſe, pour upon the liquor diſtill'd vinegar, to haſten the precipitation of the ſulphur: or elſe ſuffering the filter'd liquor to cool, ſtay till the ſulphur of Cinnabar, which is that of Antimony, be precipitated of its ſelf to the bottom of the veſſel. After which, waſh it with ſeveral waters, till it be perfectly dulcifi'd; and having dry'd it, put it up in a double glaſs-bottle, perfectly well ſtopp'd.

This Sulphur is given from two to three or four grains, and violently purges upwards and downwards all ſorts of bad humours; like the golden Sulphur drawn from the Fæces of Crocus Metallorum. And therefore it is very rarely given alone: ſome chooſing rather to prepare an *All heal*, mixing it with an ounce of Regulus of Antimony finely pouder'd, and three ounces of Oil of Sulphur, or Spirit of Vitriol both well rectify'd, letting them digeſt together for eight days, diſtilling and cohobating them three times in a Retort in a Sand-bath, and increaſing the fire at length for twelve hours, the better to fix the ſubſtance, which afterwards they waſh with Roſe-water till it be exactly dulcify'd; drying it afterwards, and giving it from ten, to twelve, fifteen or twenty grains, to purify the Maſs of the blood by ſweat, or by inſenſible Tranſpiration. Others not thus ſatisfy'd, after they have broken the Cornute, reverberate the ſubſtance for five or ſix hours, and having well waſh'd, dry'd and pouder'd it, mingle with it twice the weight of Magiſtery of Pearl or Coral, before they adminiſter it.

CHAP. LXXXIV.

Of ſome particular Preparations of Antimony.

PUT a pound of powder of Antimony into a Glaſs Cucurbit under a Chimney, and having pour'd upon it its full weight in *R*egal water, leave the water to act, till it have quite diſſolv'd the Antimony. Then having plac'd the Cucurbit in a Sand-bath, and cover'd it with its head, draw off the *R*egal water to the drieneſs of the ſubſtance. After which having finely pouder'd the Maſs, and mix'd it with a pound of powder of Salt-Ammoniack, put this into a glaſs Cucurbit, cover'd with his Alembick, and having fitted a ſmall *R*ecipient to the neck, and carefully luted the cloſures, place the Cucurbit in a Sand bath in a proper Capſula, and kindle a gentle fire under it. Upon which, a good part of the Antimony will ſublime in Flowers, part in the head, and part at the top of the Cucurbit, with the volatile part of the Salt Ammoniack. The Sublimation being over, and the Veſſels cold and unluted, you ſhall find the flowers of a different colour: thereupon having ſcrap'd them together, and beaten them and mix'd them with that which remains in the Cucurbit, make a new Sublimation, proceeding in all things as before, and repeat the ſame operations twice again. Then having ſcrap'd together all that is ſublim'd, ſeparate the Salt part by ſeveral Lotions, till the powder of Antimony be perfectly dulcify'd. Dry it, and keep it for uſe.

This powder works by ſtool. It purges gently all bad humours, giving it from two or three, to four or five grains, in a roſted Apple, or ſome Conſerve or Confection.

You may alſo grind upon Porphyry what quantity you pleaſe of glaſs of Antimony, prepar'd as I have ſaid without addition, and having moiſten'd it with Spirit of Vinegar dry the Maſs in the Sun: then grind it again, moiſten it with Spirit of Vinegar, and dry it again in the Sun, and ſo continue to do, till the powder be perfectly white. Then having put this powder into a glaſs Cucurbit, and pour'd upon it Spirit of Wine well rectify'd, about three or four fingers above the ſubſtances, place the Cucurbit in a Sand-bath, and cover it with its head furniſh'd with a ſmall *R*ecipient; and having well luted the cloſures, draw forth the Spirit of VVine with a ſoft fire, to the dryneſs of the powder which you muſt put up.

This powder does not provoke vomiting, working generally by ſtool, and ſometimes by ſweat, according as the humours are diſpos'd. The doſe is the ſame with the former. It is us'd with ſucceſs in intermitting Fevers.

You may extract a Tincture from glaſs of Antimony finely ground, and put into a Matraſs, pouring upon it ten times the weight of oil of Amber well rectify'd, or oil of Turpentine or Juniper-berries. Then having cover'd the Matraſs with a blind-head, and careſully luted the cloſures, place it in a Sand-bath, and digeſt the ſubſtances with a ſtrong heat, ſo that the Liquor may ſeem almoſt ready to boil; and continue it till it be very deep colour'd. This Tincture works by ſtool or by ſweat. The doſe is from two or three, to four or five drops in ſome proper Liquor.

You may alſo prepare an Antimonial Purgative Rob, and not Vomitive, according to the following Method. Put into a large Matraſs half a pound of powder of Antimony, and having pour'd upon it ſix pound of Juice of Quinces well depurated, and put a Cork Stopper into the mouth of the Matraſs, let them macerate for three weeks over a Bakers Oven, ſtirring the Ingredients from time to time. Then having put the Matraſs in a Sand-bath heated ſomewhat more then for ordinary digeſtions, leave it there four and twenty hours. Filter this Liquor, and evaporate the ſuperfluous moiſture, to the conſiſtence of a Rob: which may be given from two drams to a whole ounce.

You may alſo prepare an Antimonial Liquor as ſweet as Honey, in this manner. Grind upon a Porphyry half a pound of raw Antimony, with ſimple Oxymel; till the Antimony be exactly pouder'd. Then put this mixture into a Glaſs Cucurbit, and with a Blind-head, lute the cloſures; and leave it for a whole month upon a Bakers Oven, to give the Spirit of Vinegar timeto penetrate the ſubſtance of the Antimony, then ſet the Cucurbit in a Sand-bath, hotter then for ordinary digeſtions: and letting it ſtand there four and twenty hours, cool the ſubſtances, and pour out the Liquor by Inclination into another Cucurbit, and ſet it in a Sand-bath, cover'd with its head fitted with a Recipient, with the cloſures well luted. Then draw off with a Gradual fire, firſt a Flegm, then a red Liquor more ſweet then Honey, which purges gently, given in ſome proper water from a Scruple to a dram.

There is alſo another Liquor of Antimony which is call'd the *Honyed Liquor*, which is thus to be prepar'd. Macerate for fifteen days over a Bakers Oven one pound of powder of Antimony, with four pints of pure honey, ſtirring them from time to time; then boil them over a gentle fire, ſtirring them continually with a Spatula, till the whole be as thick as Pitch, and will crumble between the fingers. That done, put the Maſs into a Retort of Potters-earth luted about; place the Retort in a cloſe Furnace of Reverberation, and fit a large Ball to the neck; by this means with a fire well graduated for 24 hours, you ſhall draw forth a Liquor impregnated with ſeveral particles of the Antimony, and with it ſome flowers, which muſt be ſeparated, and will be both vomitive and purgative, almoſt like the other flowers of Antimony.

This Liquor is penetrating and corroſive, and very proper not only to cleanſe Ulcers, but alſo to conſume their ſuperfluities and Excreſcencies. It is commended againſt Gangrenes. It is us'd alone or mix'd with Mel Roſatum, Decoctions, Tinctures, Liniments and other Remedies.

Some there are that beat equal parts of Antimony, Sugar-Candy, and *A*llum burnt, and having mixt them well, and put them into a Retort of Potters earth luted about, plac'd the *R*etort in a cloſe Furnace of *R*everberation, fitted a large *R*ecipient to the neck, and luted the jointures, draw off by a gradual fire, but well govern'd, a red liquor which is highly eſteem'd for the cure of all Ulcers.

Theſe are the moſt neceſſary and moſt in uſe, for other preparations I refer the Curious to *Baſilius Valentinus*, *Schroder*, and others who have treated more amply of them, then it was my deſign to do.

CHAP.

CHAP. LXXXV.

Of the Preparations of Biſmouth.

BIſmouth is a Mineral body half Metallick, compos'd of the firſt Matter, but ſtill imperfect, of Tin, join'd with a Terreſtrial Sulphur and Mercury ill digeſted, and mix'd with much impure *Arſenical* Salt, and produc'd in the Mines of this Metal at the time of its generation. The ſubſtance of Biſmuth is very hard, eager, and brittle, of a courſe grain, ſmooth, white and gliſtering; it is uſually call'd Tin of Ice, becauſe it contains much Tin; and when it is broken, it appears in little ſmall ſubſtances like Ice. But *Authors* have alſo given it the name of the Markaſite for excellency, becauſe it ſurpaſſes all other Marcaſites in whiteneſs and beauty.

The natural *Arſenical* Salt, which makes one part of the Compoſition of Biſmuth, is the reaſon it is never prepar'd to be taken inwardly, but only for outward applications, for which the Magiſtery is chiefly us'd. For the preparation of which, having diſtill'd an *Aqua-Fortis* with equal parts of Niter and Sea-Salt, or with the like quantity of Niter and Sea-ſalt, or with the like quantity of Niter and *Alum*; beaten and waſh'd the Biſmuth till the water come from it very clear; put five ounces of it into a large Glaſs Cucurbit, and pour upon it 15 ounces of one of theſe two *Aqua Fortis*'s: and when the diſſolution is perfected, precipitate the diſſolution with Spirit of Wine rectify'd upon Salt of *Tartar*. Then having pour'd upon it a good quantity of fair water, let the precipitate ſettle, and after that pour out the Liquor by Inclination, that ſwims at the top; waſh it with ſeveral waters ſtrain'd through a fine cloath, till it be perfectly dulcify'd, and having dry'd it in the ſhade between two papers, you ſhall have a very white Magiſtery, fit for all deformities of the Skin, and to beautify the Complexions of Ladies, mixing it in proper waters or Pomatums; and therefore ſome have call'd it the White of Pearl.

The water of the firſt Lotion is very good to waſh and cure Itches and Tetters.

Biſmuth may be precipitated by weakning the Diſſolvant with a ſufficient quantity of fair water, without making uſe of Spirit of Wine; but then a good part of the Biſmuth remaining among the water, the Magiſtery will be the leſs.

You may alſo from Biſmuth extract Flowers, a liquour and Cryſtalline Salt, in this manner. Grind very finely upon Porphyry ten or twelve pound of Biſmuth, and having put it into a large Glaſs Cucurbit, and pour'd upon it the weight of it in good greeniſh White-wine, cover the Cucurbit with a Blind-head; and having plac'd it in a Sand-bath moderately hot, leave it there for three or four days, ſtirring the ſubſtances from time to time. After which having pour'd out the ſame wine, and put as much more upon the Biſmuth, renew digeſtion; and continue doing this five or ſix times one after another. Then having pour'd upon the Biſmuth one part of the VVine drawn forth, cover the Cucurbit with its head, and having a Recipient fitted to it, and luted the cloſures fitted, diſtil this wine in a Sand-bath with a moderate fire, ſetting the firſt Spirit apart, if you think fit. When the Veſſels are cold and unluted, pour upon the Biſmuth as much wine as at firſt; and pour on and abſtract, till all be drawn off, and that the Biſmuth remain dry in the Cucurbit. At which time having ſtopp'd the neck of the Alembick, increaſe the fire to raiſe the flowers of the Biſmuth, which you will find white and ſhining in the head, and muſt be kept in a double glaſs bottle cloſe ſtopp'd, or elſe diſſolv'd in the Cellar into water. Evaporate over a gentle fire all the Liquor diſtill'd, and having reduc'd it to a very little quantity, ſet it in the Cellar to Cryſtallize; putting ſome Straws among it for the Cryſtals to faſten to; then pour out the Liquor by Inclination and keep them for uſe.

The Flowers and Liquor are very proper to take away blemiſhes out of the face, and to correct the deformities of the Skin. They are alſo eſteem'd as much as the Cryſtals to cure Fiſtula's, and Malignant and Cancrous Ulcers.

I omit ſeveral other preparations of Biſmuth as being of no uſe in Pharmacy.

Beſides the natural Biſmuth, ſome notable Artiſts in Chymiſtry, having obſerv'd the parts that compoſe it, have found a way to make an artificial Biſmuth ſo fair, and well

well imitated that it is almoſt impoſſible to diſtinguiſh it from the true.

Take a pound of pure Tin Plates, and cut them into little pieces; then having compos'd a Ciment of a pound and a half of Arſenick, a quarter of a pound of white Tartar, and half a quartern of Salt Peter, beaten the whole, and mix'd it together, lay a layer of Ciment and a layer of Tin in a good Crucible, and ſet it over a naked fire in a proper Furnace, uſing a moderate fire for an hour, but then increaſing it by degrees to the utmoſt degree of violence for four hours. After fuſion, pour the ſubſtance into a Mould heated and greas'd within, and make a Lingot which you will find augmented in weight four ounces above the weight of the Tin

Zink is alſo made of the ſame ſubſtances, and in the ſame proportion, and in the ſame manner as Biſmuth; only inſtead of Tin, they uſe Lead with a little Calamin.

Note, that the more you melt either the one or the other with a little Arſenick, the fairer and clearer they will be.

The

The Fourth Part
OF THE
Royal Pharmacopœa:
CONTAINING
Several Particular Receipts taken out of
SEVERAL
FAMOUS AUTHORS;
With others
Freely communicated by ſeveral Learned And Curious Perſons.

HAving acquitted my ſelf, as far as in me lies, of the deſign which I propos'd to my ſelf, in treating methodically of every thing that concerns both the one and the other Pharmacy; and having communicated with as much ſincerity and exactneſs, whatever I thought neceſſary for the inſtruction of thoſe that apply themſelves to the profeſſion; I did not believe I could better conclude this work, than by imparting to publick view ſeveral choice Receipts, the effects whereof I have often experimented with good ſucceſs, ſome of which are rarely, or not at all to be found in Printed Authors. But as I do not think that the efficacy of Remedies is to be grounded upon the exceſſive number of the ingredients which compoſe them, as ſome imagine; it is not my intention here to diſplay, in imitation of them, long Receipts, more pompous for the number and variety of their ingredients, then to be commended for the advantage and ſucceſs which is to be expected from them. But on the contrary, it is my abſolute reſolution to produce none but ſuch as have been frequently experimented, the compoſition whereof conſiſting of few ingredients well choſen, well prepar'd, and well proportion'd, will produce without all doubt, thoſe good effects which can be rationally expected from them.

An Apopletick Water.

Take tops of Marjoram, Tilet-Flowers, of Lilly of the Vally, of Roſemary, Lavender, Sage, Primroſes, of each three handfuls. Let them macerate eight days in the Sun, or in a Stove, in Spirit of Wine rectifi'd, and Orange-flower water, of each three pints. Then diſtil them according to art in a Sand-Bath, and keep the water.

This

This water is excellent to fortify the brain and the noble parts. It is given from half a ſpoonful to a whole one, as well to prevent, as to cure the Apoplexy; and in all diſeaſes of the brain.

A Bezoardick Water.

Take the roots of Carline Thiſtle, and Swallow-wort, of each four ounces. Leaves of Water-germander, Rue, Bleſſed Thiſtle, Thyme, and tops of St. Johns-wort, of each two handfuls. Being all buis'd and cut, let them macerate in four pints of diſtill'd water of Nuts, and one pint of ſpirit of Wine; and then diſtil them in a Sand-Bath with a moderate fire; burn the ſediment, and extract a Salt out of it to be diſſolv'd in the water, which is to be kept for uſe.

This water is of great efficacy againſt the Peſtilence, and in all Epidemick diſeaſes. For preſervation, a ſpoonful is enough at a time. But three or four ounces may be given to provoke ſweats, or when more powerful effects are requir'd.

A Water to break the Stone of Quercetan.

Take juices of Leeks, Turneps, Raddiſh, of each two pound. Of Limons, Pellitory of the wall, Mouſe-ear, of each half a pound. Make a digeſtion and fermentation firſt of all theſe juices mixt together, and then a diſtillation. Cryſtal calcin'd may be added, and alſo Pidgeons-dung, which is altogether nitrous, of each as much as ſuffices.

Quercetan praiſes this Water, to break the Stone, as well in the kidneys as in the bladder; and that it operates without danger and pain. It is given from one ounce to two. It may be alſo us'd in injections.

A Water for the ſame, of the ſame Author.

Take juices of the leſſer Spurge, Turnſole, Knotgraſs, of each one ounce. In theſe macerate of Borax one ounce; then diſtil the water, and keep it for uſe.

The ſame Author highly eſteems this water for the ſame purpoſes; preſcribing it after the ſame manner.

A Coſmetick Water of Pidgeons.

Take young Pidgeons gutted, and cut into pieces number two. Crums of white-bread half a pound. Peach-kernels, and the four greater Cold-ſeeds cleans'd, of each four ounces. Whites of twelve eggs, and juice of four Limons. Macerate them twelve hours in four pints of Goats-milk, then diſtil them in a Maries-Bath. To the diſtill'd water add Borax, Camphire, Sugar-Candy, and Burnt-alom, of each three drams. Expoſe them firſt three days to the Sun, then let them ſtand fifteen days in a Wine-Sellar; filter the water, and keep it for uſe.

This water ſmooths, whitens, beautifies and preſerves the complexions of Ladies. They may waſh their faces with it at any time, but eſpecially morning and evening.

Another Pidgeon-Water.

Take Select Myrrh powder'd ſix ounces. Two young Pidgeons gutted and cut to pieces; Spaniſh-wine and Whey, of each two pints. Juice of Limons, bigger Horſleek, and fragrant Pippins, of each one pound. Water of Roſes, and Water-lillies, of each half a pint. Two whites of Eggs. Mix them altogether in a glaſs Alembick, diſtil them in Balneo Mariæ, *and preſerve the water.*

This water ſerves for the ſame uſes as the former, and is little inferior to it.

Another

Another Cosmetack Water.

Take pure fine Sugar one pound, Roch-Allum three ounces. White Poppey-seed, Flowers of Beans, Water Lillies, Violets, and greater Housleek of each one handful, the juice of four Limons, the Crum of two white Loaves, Goats milk and White-wine of each two pints; bruise what is to be bruis'd, mix and put all together into a glass Alembick, distill them in Balneo Mariæ, *and keep the water for use.*

This water is good to smooth, whiten, and preserve the complexions of Ladies.

A Diuretick Water of Monsieur D' Aquin.

Take Roots of Rest Harrow, Parsley, Fennel, Eringo's, Juniper Berries, and Alkekengi, of each two ounces; Leaves of Golden Rod, Water-Cresses, Water-Pimpernel and Elder Flowers, of each two handfuls, bruise or cut them, and macerate them all twenty-four hours in White-wine, Juice of Raddish, and Parietary, of each two pints. Then add Narbon-*Honey one pound,* Venice *Turpentine half a pound; distill them according to Art in a moderate Sand-bath, adding to every pint of distill'd Water dulcify'd Spirit of Salt one dram.*

This water is wonderfully prevalent against all difficulties of making water. It is given from one to three or four ounces.

Another Diuretick Water.

Take Roots of Stone Parsley, Raddishes, the bigger Valerian, and Peach Kernels, of each four ounces, Seeds of Burdock and Groundsel, of each two ounces, Flowers of Pimpernel, Water-Cresses, Water-Pimpernel, Crisp-Mint, and Venus-hair of Montpelier, *of each two handfuls. Being all bruis'd, macerate them three days in six pints of strong White-wine, then adding* Venice *Turpentine two pound, distill them in a Sand-bath, and keep the water for use.*

This water works the same effects as the former, and the dose is the same.

A corrected Anti-Epileptick Water of Langius.

Take shavings of Mans Scull, Misletoe of the Oak, Roots of Piony, and white Dittany, of each two ounces; fresh Flowers of Lilly Convally two handfuls; of Lavender, Rosemary, and Tilet, of each three handfuls, Cinnamon six drams, Nutmeg half an ounce, Cloves, Mace, and Cubebs, of each two drams; being all bruis'd, put them into a Matras close stopp'd, in eight pints of Malmsey; let them macerate for a week over a very gentle fire; then distill them in a moderate Sand-bath, and keep the water for use.

This Anti-Eleptick water of *Langius* has been long in requeſt; but it will be much better'd by adding the shavings of human Skull, and preparing it as here prescrib'd. It is given in Epileptick passions from two drams to an ounce. It may be us'd also as well for the prevention, as in the cure of this distemper. It is also very proper in all cold diseases of the Brain.

A Water to take away Freckles and Morphew in the Face.

Take Strawberries a pound and a half, Flowers of Lillies and Beans of each half a pound; Roch Allum, Stone Allum of each half an ounce; Sal Gemmæ, Niter, Vertdigrise, of each two drams; macerate them for ten days in Malmsey-*Wine,* Narbon-*Honey, and White wine Vinegar, of each one pint. Then distill them in a moderate Sand-bath, and keep Water.*

This Water is very proper to take away Freckles or Morphew from the Face; dipping a Linnen rag in it, and laying it upon the part, going to bed; in the morning wash with Water of Water-Lillies.

A Water againſt quartan Agues.

Take Roots and Leaves of Fennel, Leaves of Wormwood, Sage, Rhue, Mugwort, and Roſemary, or Flowers of the ſame, and tops of Leſſer Centaury; of each two handfuls; macerate them three days in four pints of White-wine, then diſtill them according to Art.

This Water is highly commended againſt the Fits of Agues, eſpecially the Quartan, given at the beginning of the fit from one to four ounces.

A Water againſt a ſtinking, virulent, and inveterate Gonorrhæa *of* Quercetan.

Take Root of Florence *Orrice, Leaves of* Cretan *Dittany, and dry Mint, of each one ounce; Seed of Agnus Caſtus, Rhue, Lettuce, of each ſix drams;* Venetian *Turpentine four ounces, White-Wine twenty ounces; bruiſe what is to be bruis'd, put all together into an Alembick, diſtill them in* Balneo Mariæ, *according to art, and keep the Water for uſe.*

This water is excellent to heal the moſt inveterate and malignant Gonorrhæas, provided neceſſary purgations, and other general Remedies have preceded. It is to be given two ſpoonfuls every morning faſting, for ſeveral days together.

Schroderus's *water againſt the Diſtempers of the Throat.*

Take Leaves of wild Pear-tree, Parſley, Sanicle, Woodbine, Water-Germander, Cinkfoil, round Birthwort, of each two handfuls. Thorough wax four handfuls, ſour Ale twelve pints; bruiſe the herbs, put them all into a Veſſel cloſe ſtopp'd, and let them ferment for three weeks. Then add three ounces of Album Græcum, and diſtill them all through a Bladder.

Give two or three Spoonfuls of this water to drink, againſt Inflammations of the throat or Palate. It may be often gargl'd; or the Patient may dip a Linnen Rag in the water and wrap about his throat.

A corrected Anti-Epileptick Swallow-water.

Take twelve Swallows, yet in their Neſts, caſt them whole into a glaſs Alembick, adding thereto ſhavings of Human Skull three ounces, Caſtor one ounce and a half, powder of Miſletoe one ounce, Juice of the Roots and Leaves of Male Piony ſix ounces. Waters of the Flowers of Tilet, Lavender, and Lilly Convally, of each a pint and a half, Vinegar of Squills half a pint; macerate them all together over a very ſoft fire for forty hours, then diſtill them in a moderate Sand-bath, and keep the Water for uſe.

This water has particular vertues againſt the Epilepſy. It is given about a ſpoonful in the fit; and may be continu'd every day, as occaſion requires, after the uſe of general Remedies.

A Hyſterick Water.

Take Juice of Neppe, Wormwood, Mugwort, Penny Royal, Hyſſop and Elder Flowers of each equal parts; diſtill them together according to Art, and preſerve the Water for uſe.

This Water is an excellent Remedy againſt all diſtempers of the Matrix. It is to be taken by Spoonfuls, to five or ſix ounces at a Time, as occaſion requires.

Another

Another Hysterick Water.

Take Roots of Piony, Briony, Orange-Peels, of each three ounces. Flowers of Mugwort, Fetherfew, Baume, Pennyroyal, Rhue, Savine, and Elder Flowers, of each one handful. Myrrh and Castor of each half an ounce, Saffron two drams. Let them macerate four and twenty hours, in Spanish *Wine, Water of the Catkins of Filberds, and Orange-Flower water, of each two pints, and distill them in a Sand-bath.*

This water is highly recommended against all Distempers of the Matrix. But the dose of it, is to be less then that of the former, from half an ounce to two ounces.

An Imperial Water.

Take Cinnamon four ounces, Nutmegs and Citron Peels, of each two ounces. Cloves, Calamus, Aromaticus, Yellow Sanders, and Roots of Piony, of each one ounce. Leaves of Laurel, tops of Hyssop, Marjoram, Thyme, Savoury, Flowers of Sage, Rosemary, and Lavender, of each one handful; bruise what are to be bruis'd, and macerate all together for twenty-four hours in White-wine and Baum-water, of each four pints, and Orange-flower Water half a pint; then distill them according to Art.

This Imperial water is highly commended in distempers of the head, the stomach and the Matrix. It is also very proper to facilitate the Birth; it is given from two drams to an ounce.

Aqua Mirabilis.

Take Cinnamon the choicest one ounce, Citron Rhind, and Nutmegs, of each six drams, Cloves, Galanga, Cubebs, Mace, Cardamoms, Ginger, of each two drams; bruise all together, and macerate them twenty-four hours in Juice of Baum, White-Wine, and Spirit of Wine, of each one pint; then distill them according to Art in a moderate Sand-bath.

This is an excellent water to fortify all the noble parts, and to excite vigour in the Venereal act.

An Anti-Nephretick Water of D. de Bellegarde.

Take Narbon-*Honey half a pound,* Venice-*Turpentine two ounces, Nephrenick-wood and Root of Rest-Harrow, of each an ounce and a half, Lignum Aloes one ounce, Galanga, Cloves, Cinnamon, Mace, Cubebs, and Mastich, of each half an ounce; bruise what are to be bruis'd, and macerate all together for three days in four pints of Aqua vitæ; then distill them with a moderate fire.*

This water is highly recommended against Gravel, and all sorts of Cholicks, given from one dram to half an ounce either alone, or mix'd in proper liquors.

A Famous Odoriferous Water.

Take Root of Florence, *Orrice and Benjamin, of each an ounce and a half, select Storax six drams, Lignum Rhodium half an ounce, Aromatick Reed and Labdanum of each two scruples; Flowers of Benjamin one scruple; being all pulveriz'd and put into a Matras, macerate them twenty-four hours in a lukewarm* Mary's Bath, *in a pint of Rosewater, and half a pint of Orange-Flower water, the Matras being well stopp'd; then distill them in the same Bath a little hotter, and keep the water for use, mixing it with Musk and Ambergrise, of each six drams.*

This water is call'd the Angels-Water, because of its sweet and pleasing odour. You may, after you have infus'd the drugs in the Waters, strain the Infusion, and having dissolv'd the Musk and Ambergrise prescrib'd, preserve the Liquor

under the name of Angels water. You may alſo make uſe of the ſediment, to mix it among Cloaths and Linnen being dryed. The uſe of is only this water external.

An incomparable Water for the Eyes.

Take Flowers of Corn flower or Blew bottle gather'd with their Cups, and bruis'd, as many as you pleaſe, macerate them in a ſufficient quantity of Snow or Snow-water for 24 hours; then diſtil them in a moderate Sand-bath and keep the water for uſe.

This water is wonderfully effectual not only to cure moſt of the Infirmities of the eyes, eſpecially ſuch as are troubl'd with Inflammations, but to clear, ſtrengthen and preſerve the ſight, eſpecially of old people; for that reaſon it is call'd *break-Spectacle* water, becauſe they that uſe it, need take no care for Spectacles. Some drops of it are to be put into the eye morning and evening, or at any other time.

A Paralitick and Apoplectick Water.

Take black Cherries bruis'd four pound, crums of White bread one pound, Root of Valerian bruis'd, and ſhavings of Harts-horn, of each three ounces. Mace and Cloves pouder'd, of each half an ounce, Saffron two drams. Flowers of Lavendder and Lilly Convally, of each three handfuls. Mix all together, and macerate them 24 hours in a warm Maries Bath, then increaſe the heat and diſtil them in the ſame Bath; and preſerve the water for uſe.

This VVater is highly commended againſt the Apoplexy, the Palſy, and all cold diſtempers of the brain, being taken from half an ounce, to an ounce.

A *water to aſſwage the pains of the Gout.*

Take Dry Ox dung, and Sperm of Frogs, of each equal parts; mix them together; put them into a Glaſs Alembick, and diſtil them in Balneo Mariæ with a moderate heat, and keep the Water for your uſe.

This water is commended to appeaſe the pains of hot Gouts, Linnen-Cloaths being dipt therein and apply'd to the part affected.

A *Water againſt the Scurvy.*

Take Roots of Horſe Raddiſh, and Garden Raddiſh bruis'd, of each one pound, Juices of Scurvy-graſs, Water Creſſes, Water Pimpernel, Money-wort, Mint, Baum, Fumitory, of each half a pint; macerate them 24 hours, then diſtil them in a Sand-Bath with a moderate heat.

This VVater is us'd with happy ſucceſs in Scorbutick diſeaſes, giving it in the morning from one, to two or three ounces, and continuing the uſe thereof, as long as neceſſity requires.

A *Treacle Water.*

Take Roots of Gentian, Angelica, Maſterwort, Valerian, and Contrayerva, of each two ounces. Citron Rinds, and Orange Peels, Cinnamon, Cloves, and Juniper Berries of each one ounce. Tops of Water Germander, Rhue, and St. Johns-wort, of each one handful. Infuſe them three days in Spirit of Wine, and water of Nuts, and Bleſſed Thiſtle, of each two pints, then adding four ounces of approv'd Treacle, diſtil the whole in a Sand-bath, and keep the Water.

This is an Excellent water to reſiſt poiſon, and to fortify all the Noble parts, being taken from one dram, to half an ounce.

Some make a Treacle water by diſſolving the Treacle in equal parts of Spirit of VVine and Vinegar, and uſe it ſo without any diſtillation.

A Royal

A *Royal Aqua-Vitæ.*

Take Lignum Aloes, Roots of Zedoary, Angelica, Carline Thiſtle, and Valerian, of each one ounce. Choice Cinnamon, Mace and Citron Rind, of each ſix drams; Cloves, leſſer Cardamoms and ſweet Fennel ſeed, of each half an ounce. Flowers of Oranges, Roſemary, Sage, and Marjoram in Flower, of each two ſmall handfuls; bruiſe what is to be bruis'd, and put them into a Matraſs with Spirit of Wine and Malmſey, wine of each four pints. Stop the Veſſel cloſe, and let them macerate over a gentle fire for three days; then diſtil them in a Sand-bath, according to art, diſſolving in the diſtill'd water Musk and Ambergriſe, of each a dram and a half; then put up the water.

This water though conſiſting of few Ingredients, deſerves to be preferr'd before a great number of compounded Aqua Vitæ's of famous Authors, where is nothing to be expected, but a confuſion of different qualities and different ſubſtances. But the perfection of this is, that though there be not many Medicaments, yet they are of great vertue, and tend all to the ſame end, which is to fortify the brain, head and ſtomach, and all the Noble parts, when enfeebl'd by the diſſipation of the Spirits, or overpreſs'd by the abundance or ill qualities of bad humours. It is to be taken faſting from one dram, to half an ounce, mix'd in proper Liquor.

The Green Water of Hartman corrected.

Take Honey of Roſes two ounces, quick Sulphur, Raw Alum, and Verdigriſe of each one ounce. Album Græcum, Tops of Savine and Elder, of each one dram. Leaves of St. Johns-wort, Roſemary, Rhue, Plantaine, Sage, Peny-Royal, of each half a handful. Boil all theſe, except the Verdigriſe, for a quarter of an hour, in White-wine, and Night-ſhade water, of each one pint; then diſſolve the Verdigriſe, and add it to the reſt being tak'n off the fire: ſtrain the green water and keep it for uſe.

This green VVater is of excellent uſe for the cure of all ſorts of Ulcers of the Mouth, throat and Noſtrils, and in all other parts of the body, as well Scorbutick, as Venereal. VVaſh the Ulcers with Cotten or Lint dipp'd in the water.

A Bezoardick Balſome.

Take Diſtill'd Oils of Rhue, Citron Rind, and Orange Peels, Lavender and Angelica, of each half a Scruple; Oil of Amber rectify'd, five drops; Camphire, four grains; Oil of Nutmegs half an ounce. Make a Balſome according to art.

This Balſome is good againſt Peſtilential air, eſpecially in Plague time. It is very proper to ſuppreſs the vapours of the Matrix. Put never ſo little up into your Noſtrils going out of doors, or in the houſe againſt the Vapours of the Matrix. This Balſome is alſo very effectual in diſeaſes of the brain, and may be call'd Apoplectick.

A Hiſterick Balſome.

Take Tears of Aſſa Fœtida, Galbanum, Opoponax, Sagapen, and Ammoniack, of each one dram. Diſtill'd Oils of Rhue, Amber and Juniper Berries, of each one ſcruple; melt the Gums in a Braſs Mortar, mix them with the Oils, and make a Balſome according to art.

This Balſome is very proper to ſuppreſs the vapours of the Matrix, put up into the Noſtrils, and to provoke the Menſtruums, anointing the Navil, and lower part of the belly therewith.

An admirable Vulnerary Balſome.

Take oil of Venice Turpentine, two ounces, diſtill'd Oil of St. Johns-wort, and wax, of each half an ounce. Verdigriſe and green Vitriol, of each ſix grains. Mix them together

together, and put them into a glaſs Viol cloſe ſtopp'd, expoſe it to the Summer Sun for ſome days, and keep the Balſom for uſe.

This Balſom is of wonderful vertue for the cure of all ſorts of curable wounds. Pour ſome few drops into the wound, then apply to it a little pillow dipp'd in the Balſom heated lukewarm.

Another Vulnerary Balſom.

Take Oil of St. Johnswort half a pint, Oil of Laurel and Venice *Turpentine, of each two ounces. Oil of Juniper Berries diſtill'd half an ounce, Powder of choice Aloes two drams, Vertdigriſe and Oil of Cloves of each one dram; mix them together, expoſe them to the Sun for ſome days, and keep the Balſom.*

This Balſom is highly eſteem'd for the cure of all ſorts of wounds.

A *Stomach Claret-water.*

Take bruis'd Cinnamon four ounces, Cloves, Ginger, Cardamoms, Galanga pulveriz'd of each half a dram; macerate them in the cold in four pints of Aqua Vitæ, *and a pint and a half of Roſewater, for ſix hours in a Matras cloſe ſtopp'd; then filter the whole, and in the filter'd liquor diſſolve two pound of pure Loaf Sugar; and the Claret-water is made.*

This Claret-water is pleaſing to the taſte, and fortifies the ſtomach and the noble parts, diſſipates wind, and creates an appetite; the doſe is from one dram to half an ounce.

An *Antimonial Claret-water.*

Take Glaſs of Antimony finely pouder'd two drams, Spaniſh *Wine a pint and a half; macerate them for a week over a very ſoft fire, in a Matras carefully ſtopp'd, ſhaking it from time to time; mix then with the whole four ounces of pure Loaf Sugar, and two drops of Oil of Cinnamon, and keep the Claret for uſe.*

This liquor muſt be preſerv'd in a double glaſs Bottle well ſtopp'd. It is very pleaſing to the taſte, and purges gently upward and downward, being tak'n from two drams to half an ounce.

A *Collyrium or Wator for the Eyes of Monſieur* D'Aquin.

Take Tutia of Alexandria *thrice quench'd in Roſewater, and ground upon Porphyry, and Cloves pouder'd, of each one ounce and a half, Sugar Candy one ounce, Camphire, Aloes, of each one dram and a half,* Spaniſh *Wine four pints, White Roſe-water half a pint; Celandine, Fennel, Eyebright, and Rhue-waters, of each two ounces; mix all together, put them in an Earthen Jug exactly ſtopp'd, and expoſe them to the Sun for fifteen days. Then keep the water for uſe.*

This water is very effectual againſt all infirmities of the eyes; uſing only the clear water, and leaving the ſediment at the bottom.

A *Collyrium of Monſieur* Fouquet.

Take Tutia prepar'd two ounces, Mace finely pouder'd one ounce, white Vitriol one dram, Fennel and Roſe-water of each a pint and a half, Plantain water half a pint; mix them together in a Stone Bottle cloſe ſtopp'd, and expoſe them to the Sun for ſome days; then keep the Collyrium for uſe.

This Collyrium is an excellent remedy for all infirmities of the eyes.

A Blew

A *blew Collyrium.*

Take of the Water where-Quick lime has been quench'd, filter'd, one pint. Salt Ammoniack pouder'd one dram. Put them all mix'd together into a Braſs Baſon; there let them ſtand all night, Filter the Liquor and keep it for uſe.

This Collyrium is one of the beſt remedies that can be prepar'd for all Infirmities of the eyes. The colour proceeds from ſome particles of the Copper, which the Salt Ammoniack, and the quick Lime have corroded off, and diſſolv'd.

A Soluble Cream of Tartar.

Take Cream of Tartar what you pleaſe, diſſolve it in a ſufficient quantity of hot water, then drop into it gently Liquor of Salt of Tartar till the Ebullition ceaſe. Evaporate the ſuperfluous moiſture, and the Soluble Cream of Tartar will remain.

The quantity of the fix'd Salt ſurmounting the acid of the Cream of Tartar, breaks the Union of its parts, and inſinuating it ſelf into its pores, makes it diſſolvable in Water cold Liquors, whereas otherwiſe it could not be diſſolv'd, but in thoſe which are boiling hot.

Soluble emetick Cream of Tartar.

Take Crocus Mettallorum mix'd with its Salts, and Cream of Tartar of each two ounces; pulveriſe them very finely, and macerate them for twelve hours in three pints of cold Fountain-water. The next day digeſt them as long in a moderate Sand-bath, and at length increaſing the fire, let them boil gently. Filter the Liquor, and evaporate it till a thin Film cover it: then ſet it in a cold place to Cryſtallize.

The parts of this Cream of Tartar being diſunited by the mixture of the fix'd Salt remaining in the Saffron of Metals; and the Cream being impregnated with the qualities of the ſame Saffron, is eaſily diſſolvable in the cold water, and fitted to purge upward and downward, giving it from two or three, to five or ſix grains, in broth, or in Wine, or ſome other Liquor.

A Choler-purging Electuary of Francis de le Boe Silvius

Take Pulp of Sower-ſweet Prunes, thick'nd to a due conſiſtence, ten ounces. Cremor Tartar and ſelect Scammony an. two ounces. Choice Rhubarb ten drams, Biting Cinnamon half an ounce, Yellow Sanders two drams, pure Sugar clarify'd and boil'd ſixteen ounces; Mix them together and make an Electuary according to art.

This Electuary purges very advantageouſly all bad humours, eſpecially Cholerick and Serous. The doſe is from two drams, to half an ounce, in Bolus, or diſſolv'd in proper Liquors.

A Water-purging Electuary of the ſame.

Take Extract of Juniper Berries and Pulp of Tamarinds thick'nd to a due conſiſtence of each four ounces. Root of Jalap finely pouder'd an ounce and a half. Choice Scammony one ounce, Biting Cinnamon, and ſweet Fennel ſeed pulveriz'd, an. two drams; clarify'd and boil'd Sugar ten ounces. Make an Electuary according to art.

This Electuary is very proper to carry off Seroſities, eſpecially Hydropical, being taken from two drams, to half an ounce, and ſometimes ſix drams.

A Cephalick Elixir.

Take Miſſleto of the Oak, Roots of Piony and the bigger Valerian, of each an ounce and a half. Piony ſeed, Laurel and Juniper berries, of each one ounce. Cinnamon, Mace, Cubebs

Cubebs, of each 3 drams. Flowers of Tilet Roſemary and Lavender of each one handful. Bruiſe what are to be bruis'd, and macerate altogether for 24 hours in Lilly Convally water, black Cherry water, and Spirit of Wine rectify'd of each one pint and a half. Then diſtil them according to art. To the Liquor diſtill'd add refin'd Sugar one pound, Tincture of Ambergriſe one dram; and put up the Elixir in an Earthen pot well ſtopp'd.

This Elixir is wonderfully uſeful in Epilepſies, Apoplexies, and other cold diſeaſes of the brain, being taken faſting from half a ſpoonful to two whole ones.

A *Hyſterick Elixir.*

Take the diſtill'd Oils of Wormwood, Penny-Royal, Featherfew, Rhue and Amber of each ſix drops. Tinctures of Saffron, and Caſtor of each three ounces; refin'd Sugar, Mugwort and Elder flower waters, of each ſix ounces. Make an Elixir according to Art.

This Elixir is proper againſt all Infirmities of the Matrix, taking the ſame doſe as of the former.

An *Antiſcorbutick Elixir Proprietatis.*

Take Myrrh of Alexandria, Aloes Succotrine, and choice Saffron pulveriz'd, of each four ounces. Digeſt them in a veſſel cloſe ſtopp'd for eight days, in a moderate Sand-bath with four pints of Antiſcorbutick Spirit, then increaſing the heat of the Bath for one hour, filter the Tinctur'd Spirit, and keep it apart. Then pour upon the remaining Maſs one pint of new Spirit, and reiterate digeſtion and Filtration; and then draw off the ſpirit in a Sand-bath with a moderate fire, till a third part only remain; and when the Veſſels are cool preſerve the Elixir. When it is to be us'd mix with it a third or fourth part of the volatile Spirit of Harts-horn.

This Elixir is highly eſteem'd in all diſeaſes that proceed from Corruption of humours. But it is chiefly made uſe of for the Cure of the Scurvy. For it purifies the blood, and quickens the ſloth of the Circulation. It is given in VVine or ſome other proper Liquor, from ſeven or eight to fifteen or twenty drops. You will find the Anti-Scorbutick Spirit in its proper place.

A *Stomach Elixir.*

Take the diſtill'd Oils of Cinnamon, Cloves, Wormwood, Citron and Orange peels of each ſix drops; Refin'd Sugar pulveriz'd, Spirit of Wine Rectify'd, and mint and Orange Flower waters, of each ſix ounces, mix them according to art, and make an Elixir.

The uſe of this Elixir is very profitable in all cold Infirmities of the ſtomach, as alſo to fortify all the Noble parts. The doſe is from two drams to half an ounce in proper Liquors.

A *Plaiſter of the Abbot of Grace.*

Take Oil of Roſes, by many infuſions very odoriferous, 16 ounces. Litharge of Gold prepar'd, and juice of pale Roſes purify'd, of each eight ounces, boil them according to art to the conſiſtence of an emplaſter; then add four ounces of yellow wax, and the Plaiſter is made.

This plaiſter is very famous for the cure of all ſorts of VVounds and Ulcers. The operation is gentle and the ſcent pleaſing, ſo that it is very fit to make Saradraps for the cure of Cauteries.

A Plaiſter

A *Plaiſter to ſtrengthen the Womb.*

Take Minion pouder'd, one pound. Ceruſe prepar'd, halfa pound. Soap ten ounces, common Oil two pints, Orange flower water, nine ounces. Boil them according to art to an Emplaſter.

This Plaiſter is highly commended to ſtrengthen the Ligaments of the Matrix, being ſpread upon a round piece of Leather, and apply'd to the Matrix.

A *Plaiſter for the Kings-Evil.*

Take Emplaſter of Hemlock eight ounces. Gummi Elemmi very pure, two ounces, Red precipitate Mercury, two ounces and a half, mix them together into an Emplaſter.

This Plaiſter is very proper to diſſolve, cleanſe and heal the Soars of the Kings-evil.

A *Powder againſt the Ague.*

Take Cinnabar of Antimony, one ounce. Common Salt roaſted two drams. Powder them together, put them into a Glaſs Cucurbit, and pour upon them four ounces of Oil of Sulphur. Let them digeſt for two days over a moderate heat in a Bath of aſhes, then increaſing the heat, evaporate the ſuperfluous moiſture. Then waſh the Maſs that remains, dry it and reduce it into Powder, and mix it with four ounces of Flowers of Sulphur, and ſet it over the burning Coals in an Earthen Platter. Stir it continually with an Iron rod, and when the flowers are conſum'd, pour in Spirit of Wine three fingers high, and when it is conſum'd, take the remaining Maſs, powder it and preſerve it for uſe.

This Powder is highly commended for the cure of all Intermitting Agues being taken half an hour before the fit, from fifteen to twenty grains, in ſome Syrop or Cordial water, and ſupping a little broth two hours after. Purgation and bleeding muſt precede the uſe of it, and you may take the ſame doſe three times, if the firſt and ſecond do not prevail. It works cheifly by ſweat.

Another Ague Curer, attributed to Riverius *by* Rolfincius.

Take pure Gold diſſolv'd in Royal water, and Glaſs of Antimony diſſolv'd in Aqua-Fortis, of each half an ounce. Quick-ſilver diſſolv'd in Aqua-Fortis, three ounces. Mix the diſſolutions, and diſtil them through an Alembick twelve times in a moderate Sand-bath, reiterating Cohobation. Upon the powder left at the bottom, pour Spirit of Wine rectify'd, and draw it off ſix times from the powder. Then Calcine the powder with a wheel fire in a Crucible, almoſt to Ignition. Give ſix grains of this Powder with twelve grains of Scammony.

The Author of this Febrifuge having only given us general notions of it, we cannot be well aſſur'd that we have the true preparation; for though the powder that *Rolfincius* has deſcrib'd, may be good in it ſelf, yet it does not ſeem to me to correſpond with all the Author has ſaid to make it a true Febrifuge. Some believe the three main ingredients, or *Hercules's*, that *Reverius* depends upon, are the Mercury, Salt, and Vitriol, and that the twelve conſequent ſublimations of the Mercury, are their twelve Travels; which may be reaſonable, provided you add to the firſt ſublimation as much raw Quickſilver as is requiſite to dulcifie the ſublimate. But what he means by the third man of might, I cannot underſtand; for though *Rolfincius*, and after him others, have made choice of Scammony, others Gummi Gutta, others of Coloquintida, others of black Ellebore; Yet if you conſider the doſe of the Febrifuge, which was uſually twenty grains for grown people, and the effects of purging upward and downward, and the proportion of the fourth Champion, it is no-where to be found but in the Antimony. For neither the Scammony nor the Gutta Gummi, in ſix grains only can produce ſuch great effects, nor are the Coloquinth and black Ellebore, as rugged as

they are, very probable to do it; for which reaſon I think the compoſition ought to be thus:

A more Probable Febrifuge *of* Riverius.

Take Mercurius dulcis twelve times ſublimated, an ounce and a half, vulgar Emetick powder for ſtrong, or corrected, as I have lately ſaid, for tender conſtitutions, half an an ounce, mix them together and make a powder.

This Powder finding the humours diſpos'd, works upwards and downwards. If you uſe the ordinary Emetick, but it will only work downward if you take the Corrected Powder. And in regard the Febrifuge contains a reaſonable doſe of Emetick Powder; the Mercurius Dulcis thus prepar'd, making the bad humours ſlippery, and ſerving as a Corrective to the Emetick Powder, we may rationally hope for good Effects. *Riverius* gave his Ague powder to all Ages and Sexes, faſting the day before the fit. You may give ſix grains to little Children in a roſted Apple, and augment the Doſe according to the age to twenty grains, and for very ſtrong Conſtitutions to four and twenty.

A *Coſmetick Ox Gall.*

Take four pints of the Gall of an Ox digeſted four and twenty hours in a Maries Bath, Roch Alum, and Salt of Glaſs ponder'd, of each one ounce. Mix them together, and put them into a Matraſs carefully ſtopp'd; and in May *expoſe them to the Sun, ſhaking them three or four times a day; then Filter them. In the Filter'd Liquor mix two ounces of Porcellane ponder'd fine, and diſſolv'd in Spirit of Vinegar, Borax, and Sperma Ceti, of each one ounce, Sugar-Candy, three ounces, Camphire and ſweet Sublimate, an. three drams. Which done, expoſe them to the Sun again for ten days, ſhaking the Ingredients often, then filter the Liquor and keep it for uſe.*

This Preparation is highly eſteem'd for clearing the face from Morphew, to defend it from Sun burning, and to take away the effects of Sun burning. The face muſt be waſh'd with it evening and morning; in the morning waſhing afterwards with water of Lillies, or VVater Lillies. Or you may travel in the Sun all day long with the face anointed with it, and waſh at night, to prevent Sun burning.

Virgins Milk.

Take the Diſſolution of Litharge of Gold in diſtill'd Vinegar, eight ounces; the diſſolution of Roch Alum in Water of Water Lillies, eight ounces. Filter the diſſolutions apart; then a while after mix them, and the Virgins Milk is prepar'd.

The uſe of it is to beautify the hands and face. They who have by them Tincture of Storax, and Benjamin prepar'd with Spirit of VVine, may make a Virgins Milk at any time, by mixing a little of the Tincture with ſeven or eight times as much of ſome diſtill'd Coſmetick water. Which is the Virgins Milk generally us'd now adays, by reaſon of its odour and good effects.

Contrayerva Stone.

Take Roots of Contrayerva, or Spaniſh Counter-poiſon, Oriental pearls, red Coral, and white Amber prepar'd, of each one dram. Crabs eyes prepar'd, as much in weight as all the reſt; make them up into Balls with gelly of Vipers, to be dry'd and and kept.

This Stone is highly commended againſt Poiſon and all Epidemick diſtempers. It muſt be finely pouder'd and given in Broth, or ſome Cordial water, from ten, to twenty or thirty grains, and ſometimes to a dram.

The Medicamental Stone.

Take Hungarian Vitriol one pound, Salt of Niter half a pound; Ceruse, Alum, Bole Armenian, Salt of Glass, of each four ounces, Salt Ammoniack two ounces; beat them all carefully, moisten'd with common Vinegar, and bake them in an Earthen pot over a gentle fire to the hardness of a Stone. Break the pot, and preserve the Stone for use.

It is very proper to cleanse and cicatrize Wounds and Ulcers, to cure the Infirmities of the eyes; the Itch, Erysipela's, and all deformities of the Skin, and also burns. It is a Specifick to stop Gonorhea's, by injection, when the Malignity of the Venome is overcome. Dissolve an ounce in two pints of Rain-water; then filter the Liquor, and use it either for Lotion, Injection, or to dip Linnen Rags in, and apply to the parts affected.

A Liniment for the Emrods.

Take Flowers of Sulphur two drams; oil of Eggs half an ounce, Oil of Roses one ounce. mingle them for a Liniment to be apply'd to the Emrods. Or

Take Salt of Saturn, half an ounce, Oils of Camomile and Roses, and juice of Wall Penny wort, of each two ounces. Make a Liniment according to art. Or

Take Oil of Line, the Pulp of an Onion bak'd under the ashes, of each two ounces, White-wax half an ounce. Make a Liniment according to art. Or

Take the Pulp of Hog-lice, Poplar Ointment, and Oil of eggs, of each one ounce. Extract of Opium half a dram. Mix them, and make a Liniment according to art.

All these Liniments are proper to asswage the pains of the Emrods.

A Liniment for Tettars.

Take red Mercurial precipitate, and green Vitriol, of each one ounce, burnt Alum half an ounce, Vertdigrise and Borax, an. two drams. Juice of red Dock, two ounces. Hogs grease and new butter, of each four Ounces. Press'd Oil of Henbane one ounce,

This Liniment is wonderful to cure all sorts of Tettars.

A *Liniment for the Sciatica.*

Take three Puppies newly whelp'd, and as many live Moles; Earth worms one pound, Leaves of Laurel, Rosemary, Lavender, Mother of Thyme, and St Johns wort an. one handful. Boil them in common Oil and Red-wine, of each three pints, to the consumption of the Wine. Then strain and press them strongly forth; to the Liquor press'd forth add of yellow wax and Goose-grease of each ten ounces.

This Liniment is highly commended to appease the pains of the Sciatica, and all sorts of Rhumatisms.

A *Liniment to prevent the Scars of the Small Pox.*

Take Litharge of Gold prepar'd, and Ceruse wash'd in Rose-water, of each one ounce; Oil of the four greater cold seeds cleans'd; and Bitter Almonds and Eggs of each half an ounce. Nightshade and Plantain Waters as much as suffices. Make the Liniment according to art, like a Nutritum.

This Liniment is highly recommended to prevent the marks of the Small-Pox.

A Liniment to stay Vomiting.

Take Oil of Nutmegs press'd, and the Queen of Hungaries water, of each half an ounce. Distill'd Oil of Wormwood, one dram Select Mastick finely palveriz'd, two drams make a Liniment according to art.

This Liniment apply'd hot to the Stomach stays vomiting.

A *Sleep provoking Liniment.*

Take Ointment of Roſes, and Poplar, of each one ounce; Oil of Henbane-ſeed preſs'd, two drams; Liquid extract of Opium, one dram. Mingle the Ingredients, and make a Liniment for uſe.

This Liniment is apply'd with ſucceſs to the Forehead and Temples, to appeaſe the pains of the head, and procure reſt.

A *Hyacinthine* Antimonial *Liquor.*

Take Hyacinthine glaſs of Antimony *finely pulveriz'd, Salt of Wormwood, of each forty grains, ſpeedwell-water, five ounces. Macerate them 24 hours in a warm Bath; Then filter the Liquor, and add to it a dram of Cinnamon water.*

This Liquor gently purges upward and downward all ill humours that it meets with. It is given very appoſitely in all Agues, being taken from three to ſix drams.

A *Hiſterick Liquor.*

Take Caſtoreum two drams, Saffron and Camphire an. one dram. Macerate them for fifteen days in one pint of Aqua-Vitæ *without any fire. Then filter the Liquor.*

This Liquor is a Specifick to ſuppreſs all vapours which riſe from the Matrix. It may be tak'n as occaſion requires, at any time faſting, from half a ſpoonful, to one whole one. It may be alſo put up in the Noſtrils, laid upon the temples, or carryed about the perſon in a box full of Cotton dipp'd in the Liquor.

A Cauſtick Liquor of Vertdigriſe.

Take Vertdigriſe four ounces. Salt of Niter eight ounces; being mix'd together, let them burn in an Iron or Marble Mortar well heated. Then pulveriſe them, and putting them into a convenient Veſſel, let them diſſolve in a moiſt place by dropping, and ſet a Veſſel under to preſerve the Liquor.

This Liquor is approv'd for the conſuming rotten and proud fleſh, and all ſorts of Excreſcencies, and particularly thoſe which accompany Venereal Diſtempers.

A Muſcilage againſt Chops of the Breſts.

Take white Gum Tragacanth finely pouder'd, two drams. Macerate them over a very ſoft fire in a ſufficient quantity of Roſe-water, and extract the Muſcilage for uſe.

Muſcilages of Gum Tragacanth are a Specifick Remedy to cure chops and clefts of the breaſts, hands and Lips, being apply'd thereto.

An *Anti-epileptick Oil.*

Take of the ſhavings of Mans Scull, that dy'd a violent death, four ounces, Amber *Pulveriz'd; being mix'd together put them into a Glaſs Retort, fitted with a Recipient, and diſtil them in a Sand-bath with a gradual fire; diſtil the Oil mix'd with the Spirit, Flegm and Volatile* Salt.

Beſides the particular vertues which the volatile Salt and Spirit of Mans-Scull and Oil of Amber mix'd have againſt the Epilepſy, the Oil which is drawn from thence is highly eſteem'd for the cure of this Malady, being given once a month every morning in ſome Cephalick water, from three or four, to five or ſix drops. You may alſo anoint with it the inſide of the Noſtrils, the Temples and the ſutures of the Scull.

An *Oil or Liquor of* Antimony.

Take Hungarian *Antimony, eight ounces, Sugar Candy ſix ounces; having pulveriz'd and mix'd them, put them into a Glaſs Retort, and diſtil them in a Sand bath with a Gradual fire, and keep the Liquor.*

This

This Liquor is highly esteem'd for the cure of Intermitting Agues, being given in white wine from three, to five or six drops, at the beginning of the fit, and reiterating the dose, if the fit return.

An Oil against Deafness.

Take Press'd Oil of Leeks, Bitter Almonds and Laurel, of each, two ounces; Spikenard, Castoreum, and Coloquintida sored, of each one dram. Juice of Rhue, and White-wine of each, an ounce and a half. Put all these into a Matrass close stopp'd, and let them digest 24 hours in a luke-warm Maries Bath, then increasing the heat of the Bath, boil them to the Consumption of the moisture, then strain and press them out; keep the Oil for use, mixing with it afterwards six grains of the best Musk.

This Oil put lukewarm into the Ears, wonderfully helps deafness in them that were not born deaf.

A Precipitate against the Jaundise.

Take Crocus Martis prepar'd with Sulphur, one ounce; Choice Rhubarb and leaves of Senna cleans'd, of each half an ounce. Choice Cinnamon, Salt of Wormwood and Tamariks, of each two drams. Saffron one dram. Pulverize what are to be pulveriz'd, and with a sufficient quantity of Syrop of Mugwort make an Opiate.

This Opiate is very proper to cure the Jaundise, especially in Virgins. The dose is from two drams, to half an ounce in Bolus, or mix'd in White-wine, or some proper decoction. Reiterate the dose as occasion requires.

An Opiate for the Tooth-ach.

Take Camphire two drams. Opium one dram. Castor half a dram. Having pulveriz'd them, mix them with Syrop of Gillow-flowers, and make an Opiate.

This is an excellent Opiate to aswage the pain of teeth: when any one is rotten, put never so little in the hollow of the tooth, and leave it there; renewing application as often as need requires.

A Paste to scoure the hands.

Take Bitter Almonds peel'd half a pound. Bruise them in a Marble Mortar, sprinkling upon them never so little Aqua-Vitæ; then add two Yolks of Eggs, Narbon Honey, an ounce and a half. Orrice root finely pulveriz'd; one ounce, mix them all together and reduce them into a Paste for use.

This Past is excellent to cleanse the hands, and is easily prepar'd. There is no need of wetting it in water, for it may be us'd as it is prepar'd.

Another Paste for the same.

Take bitter Almonds peel'd and perfectly well bruis'd, and Crums of white bread, of each four ounces. Infuse the bread three hours in new Milk, then being well mash'd in a Marble Mortar, mix it with the Almonds. Afterwards take two yolks of Eggs, Narbon Honey one ounce. Burnt Alum pulveriz'd, and Balsome of Peru, *of each one dram.*

This Paste is at least as good as the former; it suffices to rub the hands without washing. For it falls off of it self, smoothing and whitening the hands very much.

Pills against Cachexies.

Take Trochiskes of Alhandal, half an ounce; Myrrh, choice Aloes, Galbanum, Ammoniack, an. three drams. Mercury precipitate prepar'd with Gold two drams; Scammony, Jalap, the whitest Agarick, of each one dram and a half. Press'd Oil of Nutmegs one dram, of Amber, Cinnamon and Cloves, of each six drops. Extract of Juniper as much as suffices.

These

Theſe Pills are very much recommended for the cure of Cachexies, in Quartain Agues, the Dropſy, the Jaundiſe, and the retention of the Menſtruums. The Pills muſt be made up in two grains apiece, and taken two or three before Supper, and an hour before Bed time: and may be taken as oft as neceſſity requires.

Diuretick Pills.

Take Chios Turpentine, and white Vitriol finely pulveriz'd; an. two ounces. Mix them, and make a Maſs of Pills.

The vomitive quality of the Vitriol being corrected, and alter'd into Diuretick by the mixture of the Turpentine, theſe Pills work good effects in all difficulties of making water, being given from half a dram to a dram.

Sennertus's *Fever Pills.*

Take Oil or Liquor of Antimony Sugar'd, one ounce. Aloes Succotrine, half an ounce; Ambergriſe two drams. Saffron two drams and a half. Make a Maſs of Pills according to art.

Theſe Pills are proper to cure intermitting Fevers, giving them from ſeven or eight, to ten or twelve grains at the coming of the fit. They purge downwards and ſometimes provoke ſweat.

Pills for the Dropſie.

Take Elaterium, and Extract of Aloes prepar'd with juice of French Orrice, of each half an ounce. Choice Maſtick pulveriz'd two drams. Make them up into Pills according to art.

Theſe Pills powerfully purge Hydropick VVaters. They are to be taken in a morning faſting from ſix, to twelve or fifteen grains; uſing them as often as occaſion requires.

Pills againſt the Green-ſickneſs.

Take Extract of Mars *prepar'd with Musk one ounce. Extract of Aloes Succotrine prepar'd with juice of Succory, ſix drams. Extract of Rhubarb half an ounce. Extract of Saffron two drams. Diſtill'd Oil of Cinnamon ſix drops. Mix them together and make a Maſs of Pills according to art.*

Theſe Pills are excellent to cure the Green ſickneſs in young Virgins; taking a ſcruple at a time in a morning faſting and drinking after them two or three ounces of VVormwood VVine; and walking after it about an hour, for ſeveral mornings together.

Pectoral Pills.

Take Tears of Storax two drams, Extract of Liquorice a dram and a half, Extract of Saffron four Scruples, Labdanum, Olibanum, choice Myrrh, and extract of Opium, of each one dram, Ambergriſe one Scruple, Syrop of Citron Rinds, as much as ſuffices. Make a Maſs according to art.

Theſe Pills are excellent to ſtay defluxions that fall upon the Lungs; and to aſſwage the violence of Coughs. The doſe is from five or ſix to eight or ten grains.

A Powder againſt the Gout.

Take Hermodactiles, choſen Turbith, Caſtus, Mechoachan, and Scammony, of each one

one dram. Sugar Candy two drams. Make a powder of all together for use.

This Powder is proper to purge the Serosities that feed the Gout. It must be given in white-wine in a morning fasting from a Scruple to a dram.

An Astringent Powder.

Take Bole Armenian, Seal'd Earth, of each two ounces, Pomegranate flowers, Red-Roses, Dragons-blood, Seeds of Sumach, and Whortle-berries, Frankincense and Mastick, of each one ounce. Make them all into a powder for use.

This Powder may be given in wine, or in some decoction, from a Scruple to a dram, in losses of blood, and in weaknesses of the stomach and Intestines. It may be also apply'd outwardly, incorporated with whites of Eggs, Vinegar, or some astringent water or decoction, like a Cataplasme, to stop defluxions, and los's of blood, and to strengthen and close the parts.

A famous Bezoardick Powder.

Take Roots of Angelica, Spanish Counter Poyson, Virginian Dragons wort, of each half an ounce. Oriental Bezoar, Powder of Vipers and Mineral Bezoar, of each three drams, Unicorns-horn, and prepar'd Pearls, of each two drams. Roduce them all into a very fine Powder, and mixing with it Oils of Angelica, Citron-rind and Cinnamon, of each three drops, keep it for use.

This is an excellent powder against all sorts of Poisons and Venoms. For in fortifying and defending the Noble parts, it expels the Malignity by sweat, or by insensible Transpiration, given in *Spanish* wine or some Cordial Liquor from a Scruple to a dram.

A Caustick Powder, or a Specifick Corrosive of Paracelsus.

Take Corrosive Mercury, Sublimate three ounces; Salt Ammoniack, two ounces. Having powder'd them together, and put them into a Matrass, pour upon them one pint of Aqua-Fortis, which being evaporated in a moderate Cinder-bath, till the Ingredients have acquir'd the consistence of a Paste: dry the whole mass with a moderate heat, and reduce it into powder for use.

This Powder Cauterizes speedily and violently superfluous flesh, and such excrescencies as are to be taken away. Its quick operation, and the regard which is to be had to the nature of the Corrosive Sublimate, require much prudence in the use of it. So that you are to put but a very little on at a time; and to use it only upon strong bodies, and to apply it upon those parts of the body which are distant from the Emunctories, and Noble parts.

A Dentifrice Powder.

Take Pumice Stone burnt, white Corral, Cuttle fish bone, and Cream of Tarta[illegible] prepar'd upon Porphiry, the Root of Florence Orrice finely pouder'd, an. half an ounce. Salt Ammoniack pulveriz'd one dram, Oriental Musk, and Ambergrise, an. three grains. Mingle them and make a Powder for use.

This Powder is very proper to cleanse and whiten the teeth. You may use it as it is, or mix'd with Syrup of Corral, or dry Roses, or with Honey of Roses, and reduce it into an Opiate before you rub your teeth.

A famous Anti-epileptick Powder.

Take the Secondines if a Woman of a Sanguine complexion, brought to bed of her first Child, being a boy, dry'd and cleans'd from the Membranes, one ounce. Roots of white Piony, and seed of the same, of each half an ounce; shavings of Mans Scull, put to a violent death, shavings of Unicorns horn, hoof of an Elk, Misseto of the Oak, Roots of wild

wild Valerian and ſwallow-wort, of each three drams; Pearls and Coral prepar'd, Contrayerva Stone, white Amber, and ſeed of Goats Rhue, of each two drams, Oriental Musk and Ambergriſe, of each one Scruple, mingle them and make a Powder for uſe.

This Powder produces good effects in the accidents and cure of the Epilepſy, given in Cephalick Waters from half a Scruple to half a dram. It may be mingled with Solid and ſoft Electuaries, and the uſe of it continued as occaſion requires.

An Incarnating Powder.

Take Oblibanum, Sarcocoll, Maſtick, Myrrh, Aloes, Mummy, long and round Birth-wort, of each one ounce, make a Powder of all together for uſe.

This Powder cleanſes wounds, and cauſes the fleſh to grow, being lay'd to them alone, or mix'd with Ointments, or in proper waters.

A Powder to aſſwage the pains after delivery.

Take Roots of Athamantick Spignel, and bigger Cumfrey, of each two drams, Amber prepar'd, Peach Kernels cleans'd, of each one dram and a half; Cinnamon, Mace, and Saffron, of each two Scruples. Mingle them and make a Powder for uſe.

This Powder is highly eſteem'd to aſſwage the tormenting pains that happ'n to moſt Women after delivery. It is to be given in Broth from one Scruple to two.

It is credibly affirm'd that the blood which iſſues from the ſtring of the Navel, which the Midwife cuts with her Sciſſars, given hot to the weight of half an ounce, is a ſoveraign remedy to prevent and appeaſe theſe pains.

A *Powder of Violets.*

Take Roots of Florence Orrice one pound, yellow Sanders, five ounces, Red Roſes, four ounces. Storax, Benjamin, of each two ounces, Ciperus and tops of Marjoram, of each one ounce. Lignum Rhodium, half an ounce, Cloves, Aromatick Reed, and Flowers of Lavender, of each two drams; Make all theſe into a courſe Powder for uſe.

The odour of Violets which the Orrice imparts to the powder, gives it its name. This Powder is to be put among Cloaths and Linnen.

An exquiſite Powder of Vipers.

Take Vipers Exenterated with the hearts and Livers pulveriz'd three ounces, white Sugar pouder'd two ounces; diſtill'd Oils of Angelica and Citron Rind, of each half a dram. Reduce all theſe into a Powder.

This Powder being aromatiz'd by the Oils, and ſweeten'd by the Sugar, works more effectually then the ordinary Powder of Vipers. It is to be given in proper Liquors from a Scruple to a dram.

A *Chalybeate Salt againſt an ill habit of body.*

Take Vitriol of Mars, one ounce, Sal Prunelle, two ounces, Salt extracted out of the Dead head of Aqua-Fortis, three ounces; Pulverize them together; then put them into a Glaſs Cucurbit, and ſet them in a Sand-bath with a gradual fire augmented till the matters look red, flow like water, and at laſt turn to a red hard Stone, which is to be kept for uſe.

This Salt is highly recommended in Cachexies and Scorbutick diſtempers to purge the Maſs of the blood, create an Appetite, open the paſſages of the Urine, divert fluxes of Rhume, provoke ſleep, and to carry off bad humours by ſtool, Urine and Sweat, or by inſenſible tranſpiration. It is to be pouder'd and giv'n

in

in ſome proper Liquor from ſeven or eight, to twelve, fifteen or twenty grains.

A *Diuretick Salt.*

Take the Urine of a healthy man, put into it as much Hungarian *Vitriol powder'd, as it is able to diſſolve; make the diſſolution in a large Veſſel, that there may be Room for Ebullition. Which being ceas'd, put the Liquor into a Glaſs Cucurbit, cover'd with its head, and diſtil off the flegm and Spirit in a Sand bath, firſt with a ſlow fire, then with a gradual fire increas'd, and ſublimate the volatile Salt at laſt.*

This Salt compos'd of the volatile Salt of the Urine, and ſeveral acid particles of the Vitriol, vigorouſly expels ſerous humours by Urine, the paſſages whereof it opens. It is to be given in White-wine or Diuretick waters or decoctions from a Scruple to a dram. It is of great uſe in Dropſies diſſolv'd in opening decoctions. For which purpoſe you may mix the Spirit with your ordinary drink. The Flegm apply'd to the Gout, aſſwages the pain thereof. It is alſo good to allay the Inflammations of the eyes.

An Epileptick Spirit.

Take Flowers of Lilly Convally, Lavender, Tilet, Sage Primroſes and Roſemary, of each two handfulls. Gather the flowers in their Seaſon, and macerate them all together in ſix pints of Spirit of Wine rectify'd. Then add to them Miſſleto of the Oak, Roots of Valerian, and Male Piony, *of each four ounces, being bruis'd and macerated eight days in a pint of* Malmſey; *Cinnamon, Cloves,* Mace *and Nutmegs, of each half an ounce; mix them all together, and diſtil them in a Glaſs Cucurbit cover'd with its head, in a Sand bath, according to art; and preſerve the Spirit for uſe.*

This Spirit is very proper for the eaſe and cure of Epileptick diſeaſes. It is to be given from two drams, to half an ounce alone, or mix'd in Cephalick Liquors. It may be alſo put up into the Noſtrils, apply'd to the Temples, and the ſutures of the *Scull.*

An Anti-ſcorbutick Spirit.

Take Juniper Berries, and Elder Berries brus'd, of each four pound, ſeed of Scurvy-graſs, Bleſſed Thiſtle, the Garden Creſſes, of each two pound. Juices of Scurvy-graſs, Water Creſſes, Water Pimpernel, Horſe-raddiſh, Arſemart, Money wort, *Celandine and Fumitery, of each two pound. Put them all into a fit Veſſel, and having mix'd with them a pint of Ale-yeſt, ſet them to ferment in a Stove, and when that is over, diſtil them, and reſerve the Spirit.*

This Spirit is excellent for the cure of Scorbutick diſeaſes. For it breaks the force of the acids which hinder Circulation, procuring its natural Motion, and expelling its Impurities. It is to be taken from two drams to half an ounce, in a morning, faſting, in *Spaniſh*-wine, or in the Spiritous Water that follows the Spirit after its Diſtillation.

A Treackle Spirit.

Take Roots of Maſterwort, Angelica, Athamantick, Spignel, and bigger Valerian, of each three ounces, Juniper Berries, and ſeed of Biſhops weed, and Seſeli of Marſeilles, of each one ounce, approv'd Treacle four ounces. The Roots and Seeds being bruis'd, macerate them eight days with the Treacle in two pints of Spirit of wine rectify'd; then make your diſtillation according to art, and preſerve the Spirit.

This Treacle Spirit powerfully reſiſts all ſorts of Poiſons. It is to be given in *Spaniſh*-wine, or in Cordial Liquors, from one to three or four drams. It may be alſo put up into the Noſtrils, or apply'd to the Temples and ſutures of the Scull.

A Uterine Spirit.

Take Roots of round and long Birthwort, Piony, and leſſer Valerian, of each two ounces. Caſtor one ounce. Dry tops of Wormwood, Mugwort, Tanſey, Fetherfew, Elder and Camomil Flowers of each one handful. Having bruis'd and cut them altogether, let them macerate three days in four pints of rectify'd Spirit of Wine; then diſtil them according to art, and keep the Spirit.

This Spirit is very effectual to ſuppreſs the vapours that riſe from the Matrix, and to open its obſtructions. It is to be given from one to two or three drams at a time, in Hyſterick Waters or decoctions. It may be alſo put up into the Noſtrils, apply'd to the Temples, or upon the Navil.

An Epileptick Syrup.

Take Miſſleto of the Oak, Roots of Piony, and ſhavings of Mans Scull, violently kill'd, of each half an ounce. Flowers of Lilly Convally, Lavander, Tilet, Roſemary, Sage, Marigolds of each one little handful. Bruiſe the Miſſleto and Roots and put them together with the Mans Scull and flowers into a Matraſs, and pour upon them one pint of rectify'd Spirit of Wine, and having exactly clos'd the Veſſel, let them macerate a week together over a moderate heat. Then draw off half the Spirit of Wine with a gentle heat, and preſerve it apart. The remainder being preſs'd and filter'd, reduce it into the conſiſtence of a Syrup with eight ounces of pureſt refin'd Sugar. Then aromatize it with two drops of diſtill'd oil of Cinnamon.

This Syrup is highly commended for the prevention and cure of the Epilepſy. It is to be taken alone, faſting, from half an ounce to an ounce. You may reinforce the doſe with a dram of the Spirit drawn off, or mix the Syrup with Cephalick Waters or decoctions.

A Scorbutick Syrup of P. Foreſtus.

Take Juices of Scurvy graſs, and water Pimpernel depurated of each three pints, pure refin'd Sugar two pound. Make a Syrup according to art.

The uſe of this Syrop is very ſucceſsful in Scorbutick Maladies, tak'n from one ſpoonful to two.

Tablets of Saffron of Mars.

Take Saffron of Vitriol of Mars *half an ounce, Earth worms waſh'd in Wine dry'd and pulveriz'd, two drams. Cinnamon finely pulveriz'd half a dram. Refin'd Sugar boil'd in Mugwort Water, ſix ounces. Make Tablets according to art.*

Theſe Tablets are proper to open obſtructions of the bowels; and particularly thoſe of the Matrix. The doſe is from two drams to half an ounce. They are to be taken in a morning faſting, drinking after them two or three ounces of Wormwood VVine.

Diuretick Tablets.

Take Roots of Reſt Harrow, Eringos, Fennel, Butchers Broome, and Stone Parſley of each half an ounce, Seeds of Burdock and Groundſil of each two drams, make a decoction of all together in two pints of Raddiſh water. Boil the ſtraining according to art with half a pound of double refin'd Sugar, into Tablets, of two drams weight.

They who are troubl'd with gravel and ſtoppage of Urine, may uſe theſe Tablets with ſucceſs, taking one or two in a morning faſting.

Tablets

Tablets to ſtop a Gonorrhea.

Take Seeds of Plantain, Agnus Caſtus, white Poppies, Rhue, whortles and Henbane, Red Roſes, dry'd Mint, and Coral prepar'd, of each two drams. Reduce them all into a very fine powder, and make Tablets thereof with Muſcilage of Gum Tragacanth, and double refin'd Sugar, of each eight ounces. Make every Tablet half an ounce in weight, and let the Patient take one every morning faſting.

Theſe Tablets are proper to ſtop Gonorrhea's after the uſe of general Remedies.

Tablets againſt Burſtneſs.

Take Root of the greater Cumfrey dry'd, one ounce, Red Roſes cleans'd from their bottoms, choice Maſtick, red Coral prepar'd, and Dragons blood, of each two drams. Sugar Candy one pound. Powder all theſe, and make them into Tablets of two drams weight with Muſcilage of Gum Tragacanth.

Theſe Tablets are highly commended to fortify the parts of thoſe who are ſubject to burſtneſs: provided they uſe neceſſary Truſſes. Take one at a time at any hour, faſting, and continue the uſe of them as need requires.

Pectoral Tablets.

Take Pulp of the Root of Althea, *one ounce, Powder of Florence Orrice Root, and Liquorice ſhav'd, an. two drams, Flowers of Sulphur, two ſcruples, Flowers of Benjamin, one Scruple, refin'd Sugar eight ounces. Make up the whole into Tablets with Muſcilage of Gum Tragacanth.*

Theſe Tablets give great eaſe to thoſe that are troubl'd with violent Coughs; take half a one at a time, at a diſtance from meals, at any hour of the day, when you are diſturb'd by the Cough.

A Cerate for a Mask for Women.

Take whiteſt wax, four pound, Sperma Ceti, two ounces. Oil of the four greater cold ſeeds cleans'd extracted without fire, and Biſmuth precipitated, an. three drams. Borax, and burnt Alum finely powder'd, of each half a dram. Melt and mix them in Balneo Mariæ, and at the ſame time dip and ſpread the cloath.

This preparation to line Womens Masks is very true and eaſy, and fit to preſerve the complexion of Ladies.

A Cerate to be laid upon the Breaſt after Child-bearing.

Take Oil of Roſes ſix ounce, Periwincle broi's'd, three ounces; Juices of Mint and leſſer Sage, of each one ounce and a half. Boil them over a ſoft fire to the Conſumption of the juices; then ſtrain and preſs them. Into the preſs'd oil melt yellow wax cut in o pieces, three ounces, when the Ingredients are half cold, add half an ounce of choice Maſtick finely powder'd, and then dip the cloth in it.

This Cere-cloth is proper to prevent the Breaſts from growing big after Child-bearing; as alſo to change the courſe of the Milk, and to turn it downward. The Cere-cloath muſt be laid hot upon the breaſts, and wrapt up with warm cloaths, and be continually apply'd till the Milk be gone.

Odoriferous Trochisks, or little Cyprian Birds.

Take Powder of Willow Coals, three ounces, Labdanum two ounces, Storax, Benjamin an. half an ounce, Maſtick, Sweet Tacamahacca, and yellow Amber, two drams. Lignum

Rhodium, a dram and a half. Make the whole into Trochisks mix'd with muscelage of Gum Tragacanth extracted with Rose-water, and dry them in the shade.

This is an excellent perfume for Chambers and Rooms of Entertainment.

Other Trochisk, or little Ciprian Birds.

Take Coals of Rosemary pulveriz'd, four ounces. Labdanum two ounces. Storax and Benjamin, of each one ounce. Roots of Cyperus, Aromatick Reed, Mastick and Amber, of each two drams, Cloves one dram, Musk, Ambergrise and Civet, ten grains. With a muscilage of Gum Tragacanth extracted with Orange flower water make up your Trochisks and dry them in the shade.

They are sweeter then the former, but their use is the same.

Other Richer Trochisks.

Take Rosin of Storax, prepar'd according to my directions, Choice Benjamin and Sallow Tree ashes, of each one ounce, sweet Tacamahacca very fine, and Lignum Aloes finely pulveriz'd, of each half an ounce; Ambergrise one dram, Musk half a dram. Zibet, six grains. Distill'd Oils of Lignum Rhodium, Cinnamon, and Cloves, of each six drops. Make up the Trochisks with Gum Tragacanth extracted with Rose-Water.

These Trochisks are much dearer, but they are incomparably much more sweet.

An Ointment to cure Burns.

Take new Butter two pound. The Butter being melted over a moderate Fire, put into it, when tak'n off the Fire, as much Snow as the heat of the Butter can conveniently melt. Then scumming off the Butter that swims above the Snow-water, add to it an ounce of Venice Ceruse powder'd. Camphire powder'd with never so little Spirit of Wine one dram; and mix it up into an Ointment.

This Ointment is highly esteemed for the cure of all sorts of Burns.

Another Ointment for Burns.

Take Barrows Grease, one pound, White-wine, two pints, Leaves of lesser Sage, Ground Ivy, and Wall Ivy, Marjoram and bigger Housleek, of each two handfuls. Boil them together over a soft fire to the consumption of the moisture, stirring them often. Then strain and press them out strongly, and keep the Ointment.

This Ointment is no less commended then the former for the cure of Burns.

A Yellow Ointment.

Take Butter boil'd over a gentle fire, and purify'd from dregs and moisture, six pound; Yellow Wax, four pound; Rosin, two pound, Venice Turpentine one pound. Make an Ointment according to art.

This Ointment is made somewhat solid to the end it may lye upon the parts. It is proper to cure Ulcers of the Legs, Tettars, Childblains, Chaps and Rifts of the breasts and other parts of the body.

A black Ointment to open all Apostemes, though Pestiferous.

Take Common Oil two pound. White and Yellow Wax, Rams fat near the Kidneys, Pure Rosin, Black Pitch, and Venice Turpentine, of each half a pound. Choice Mastick finely pulveriz'd two ounces. Make an Ointment according to art.

This Ointment is very proper to break all sorts of Apostemes, as also Pestilen-

tial

tial Carbuncles and Venereal Bubos. The Consistency of this Ointment is harder then of other Ointments. It is to be us'd from the first breaking of the Apostеme, till the cure be perfected.

A most approv'd Ophthalmick Ointment.

Take Ointment of Roses, two ounces. Narbon-Honey half an ounce, Choice Aloes, and Sarcocol three days infus'd in Womans Milk without stirring, but changing the milk one a day, of each two drams. Powder of white Trochisques *of Rhases, Bole-Armenian, and* Tutia *prepar'd, of each four Scruples, White Vitriol and Sugar Candy, of each once dram. Powder of Saffron, Myrrh and Olibanum of each two Scruples, Theban Opium* 15 *grains. Make an Ointment according to art.*

This is an excellent Ointment for infirmities of the eyes. Put a large drop into the eye, and let it melt, and sleep upon it: in the morning wash with Plantain Water or white Rose-water.

An Ointment to catch Fish.

Take Mans and Cats fat of each half an ounce, Mummy finely pouder'd three drams, Cummin seed finely pouder'd one dram. Distill'd Oils of Anise and Spike of each six drops, Civet and Camphire five grains. Make an Ointment according to art.

This Ointment has a wonderful vertue to draw Fish. Rub the Line with it, and bait the hook with an Earth-worm, and then holding the Line a while in the VVater, you shall see the effects of it.

A Green Ointment.

Take new Butter boil'd and purify'd 4 *pound, Rosin, and Burgundy pitch, of each one pound, Yellow Wax, four ounces. Make an Ointment according to art, and when it is off the fire, add two ounces of Verdigrise pouder'd; stirring the whole till the Ointment be cold.*

This is a wonderful Ointment to cleanse and heal all sorts of VVounds and Ulcers.

A Specifick Purger and Sudorifick of Helmontius.

Take raw Antimony and Salt Ammoniack powder'd and mix'd together, of each six ounces, Sublime the Combustible red Flowers according to art; of them take four ounces. Pure Niter eight ounces, let them fulminate in subliming pots, and gather the Flowers together without any wast. Dulcify the Flowers with hot water, till there be no more Saltness remaining. Upon this Powder dry'd over a very soft fire, pour the purest Spirit of Wine, four fingers above the matters. Put them all into an Alembick with a Recipient luted to it; then distil them at first with a gentle fire, increas'd at length that the substances may boil to dryness. Expose the Powder being perfectly dry'd to the fire for an hour, and keep it for use.

I thought I could not better conclude my Pharmacopœa, then with this Remarkable Preparation of Antimony, which provokes sweat very powerfully, and opens the belly gently, being taken at a distance from meals, from twenty to thirty grains, in some Conserve, in Bolus, or dissolv'd in some Cordial water.

Crolius

The End.

The Explanation of the first Figure.

A *A Furnace for the distillation of Spirit of Wine.*
B *The Copper Vessel Tinn'd within, containing the Aqua Vitæ.*
C *The Copper Serpentine resting upon a Pillar.*
D *The head of the Serpentine.*
E *The Refrigerent.*
F *Another Furnace for the same use.*
G *The Copper tinn'd Vessel containing the Aqua-Vitæ*
H *The Tin Serpentine.*
I *The Glass head.*
K *The Recipient.*
L *A Blind head.*
M *A Funnel.*
NO *Two Glass heads, one upon another, the undermost of which is open at top.*
PP *A Matrass of Rencounter.*
QQ *Cucurbits of Rencounter.*
R *An Iron to cut off the neck of the Recipients.*
S *The stopper to stop the door of the Furnace.*
T *A Glass Platter.*
V *The Pipe.*
X *The thing that bears the Recipient for the Spirit of Wine.*

The Explanation of the second Figure.

A *The Tower of the Athanor.*
BC *Two Furnaces heated by the fire of the Tower.*
DD *Two Canals containing the Coals.*
EE *The uppermost openings of the two Canals.*
FF *The doors of the two Furnaces.*
G *A Wind-Furnace.*
H *The door of the Furnace.*
I *The end of the Pipe that carries the wind into the Furnace.*
L *The Bellows.*
MM *Pieces of Wood that bear & serve to move the Bellows.*
OO *The*

OO *The Chimney.*
P *An Iron square serving instead of a Grate for the Furnace.*
Q *A flat piece of Iron to lay upon the square.*
RR *Stopels for the Canals of the Towre.*
ST *Two Crucibles.*
V *Iron Pincers.*
X *Iron Tongues.*

The Explanation of the third Figure.

A *The Furnace for the Aludel.*
B *The Aludel.*
CCCCC *The Pots of the Aludel.*
D *The head of the Aludel.*
EE *Great Earthen pots for the distillation of the Spirit of Sulphur.*
FF *Glass Bells.*
GG *Crucibles containing the Sulphur.*
HHH. *Three large Glass Platters.*
III *Three Crucibles containing the Sulphur.*
KKK *Three Glass Bells.*
LLL *Three Heads.*
M *A Vessel of Glass for Circulation.*
N *A Glass Alembick all of one piece.*
O *A Pelican.*

An Explanation of the fourth Figure.

A *The Furnace.*
B *A Copper Vessel tinned within.*
C *The Moors head.*
D *A Barrel containing Water to cool the Liquor that distills, and the Pipe that carries the Liquor into the Recipient.*
E *A Recipient.*
F *The Iron horn for Regulus's.*
G *A Steel Mill.*
H *A Furnace for four Retorts at a time.*
IIII *Four large Recipients.*
K *A Vessel to separate the Oil from the distill'd*

ſtill'd Waters with a weike.

L A *Mould.*

An Explanation of the fift figure.

A A *Furnace of Reverberation.*

B *The Duomo.*

C A *Furnace for the diſtillation of herbs in a Sand-bath.*

D *The Copper Veſſel tinn'd within, containing the herbs.*

E *A Copper head Tinned within.*

F A *Copper Veſſel for the Balneum Mariæ.*

G *A Glaſs Bottle with a Tunnel for Filtrations.*

H *A Recipient.*

I *A Glaſs Hell.*

KK *Twins.*

L *An Earthen Capſula.*

M *The ſtopple for the notch of the Capſula.*

N *A Matraſs with a long neck.*

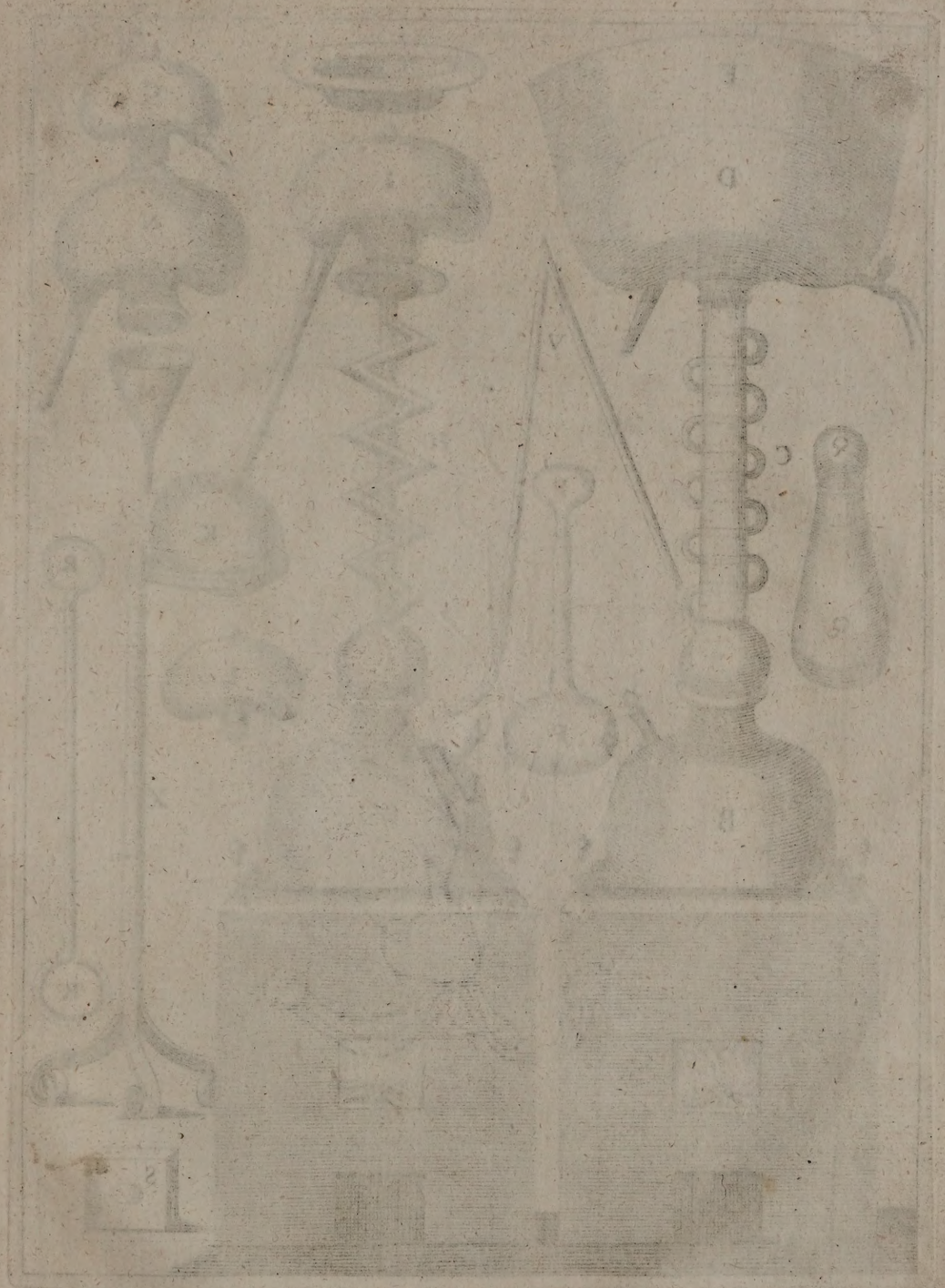
O *The head of the Matraſs.*

P *The Recipient.*

Q *The Philoſophers Egg.*

R A *Glaſs Veſſel to ſeparate the Oils.*

S *Another Glaſs Veſſel for the ſame uſe.*



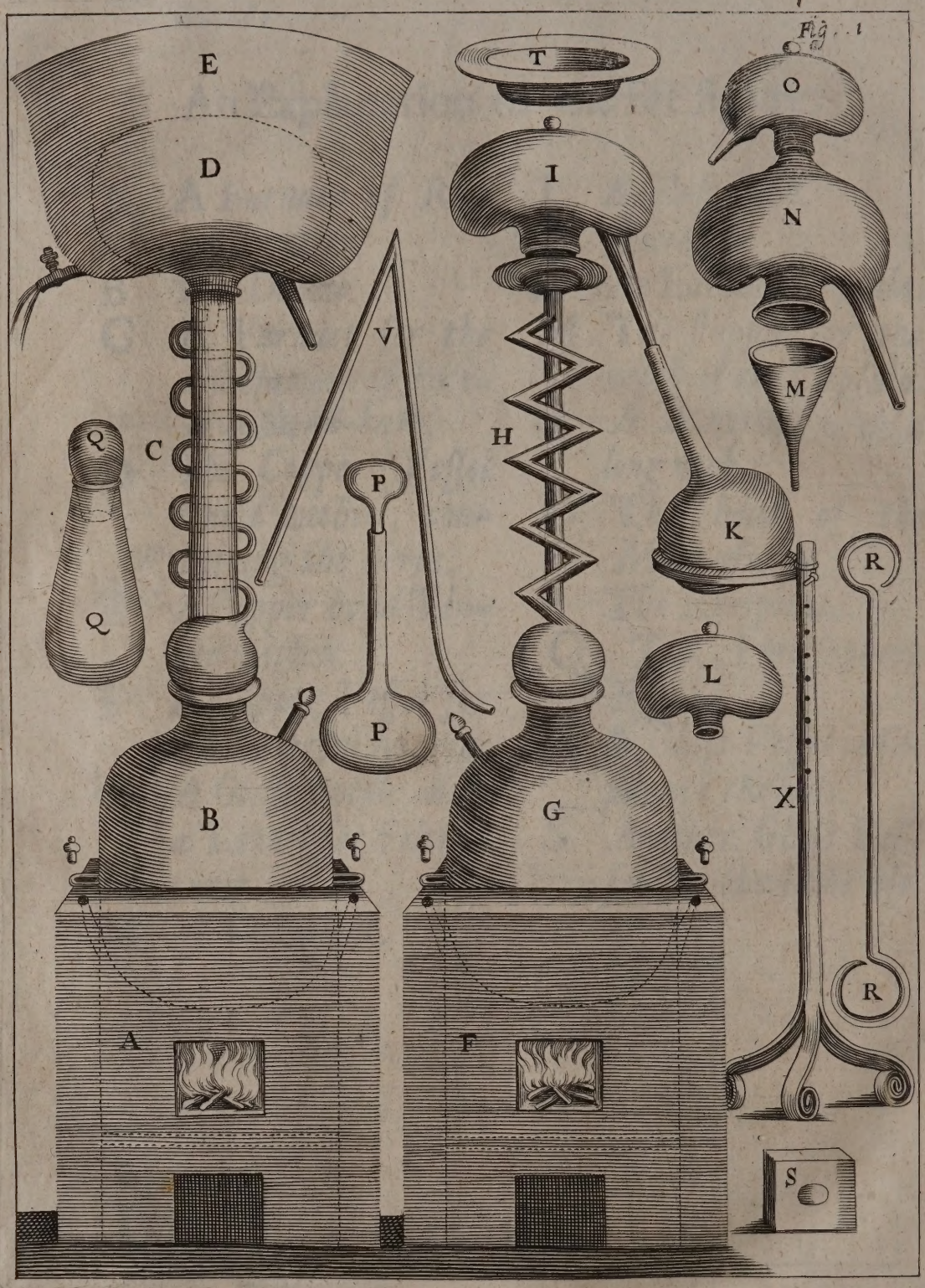


Fig. 1
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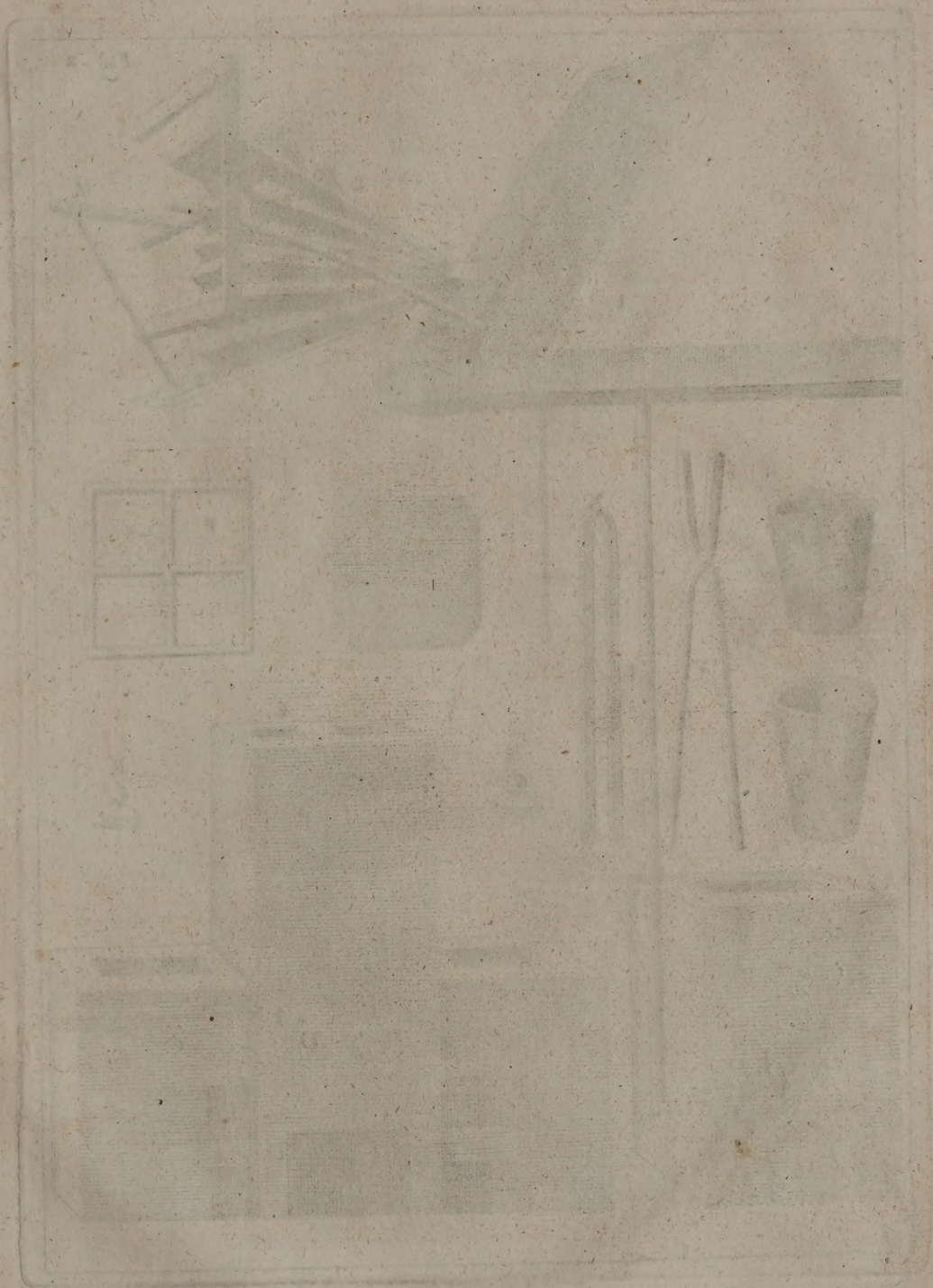
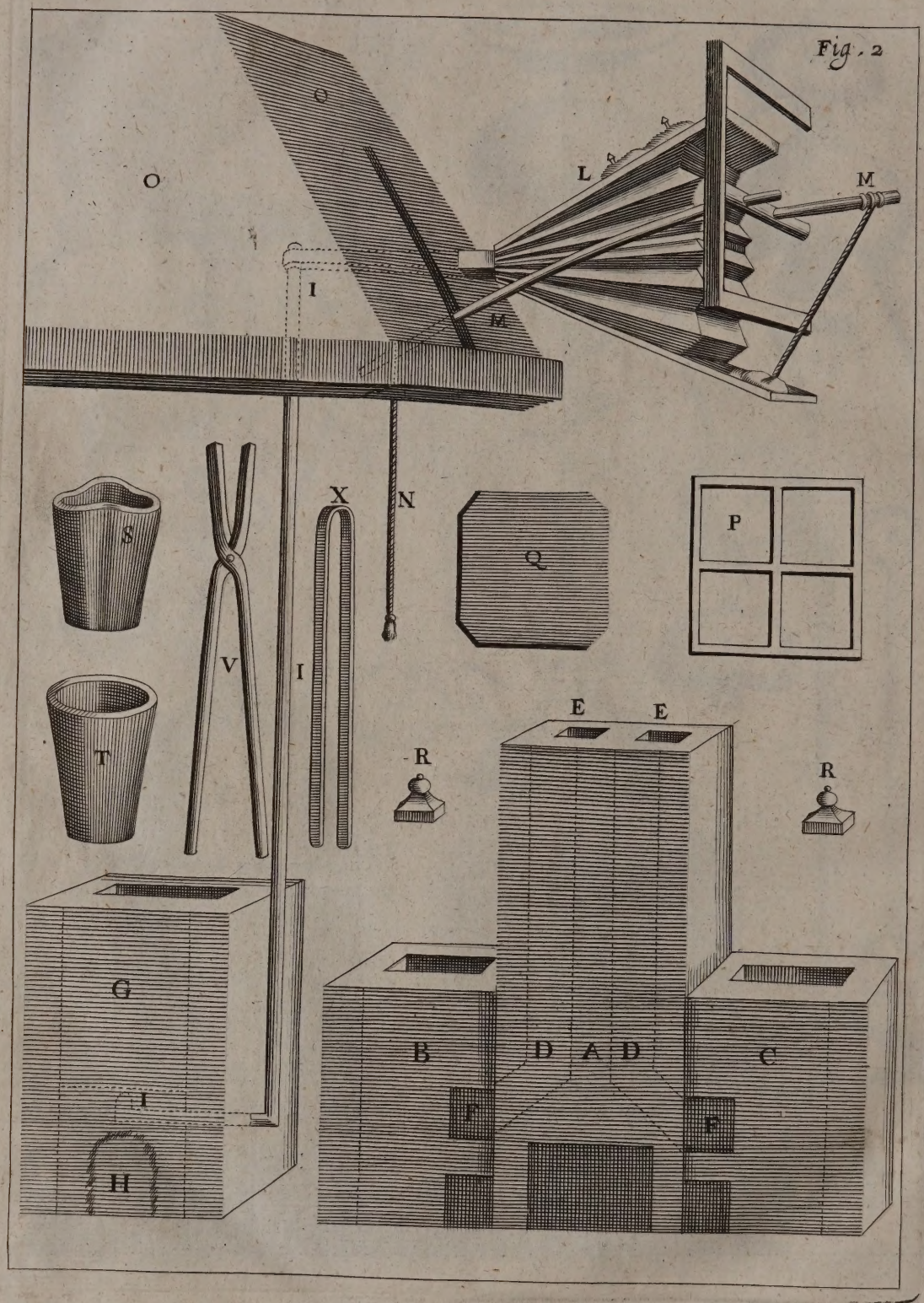


Fig. 2



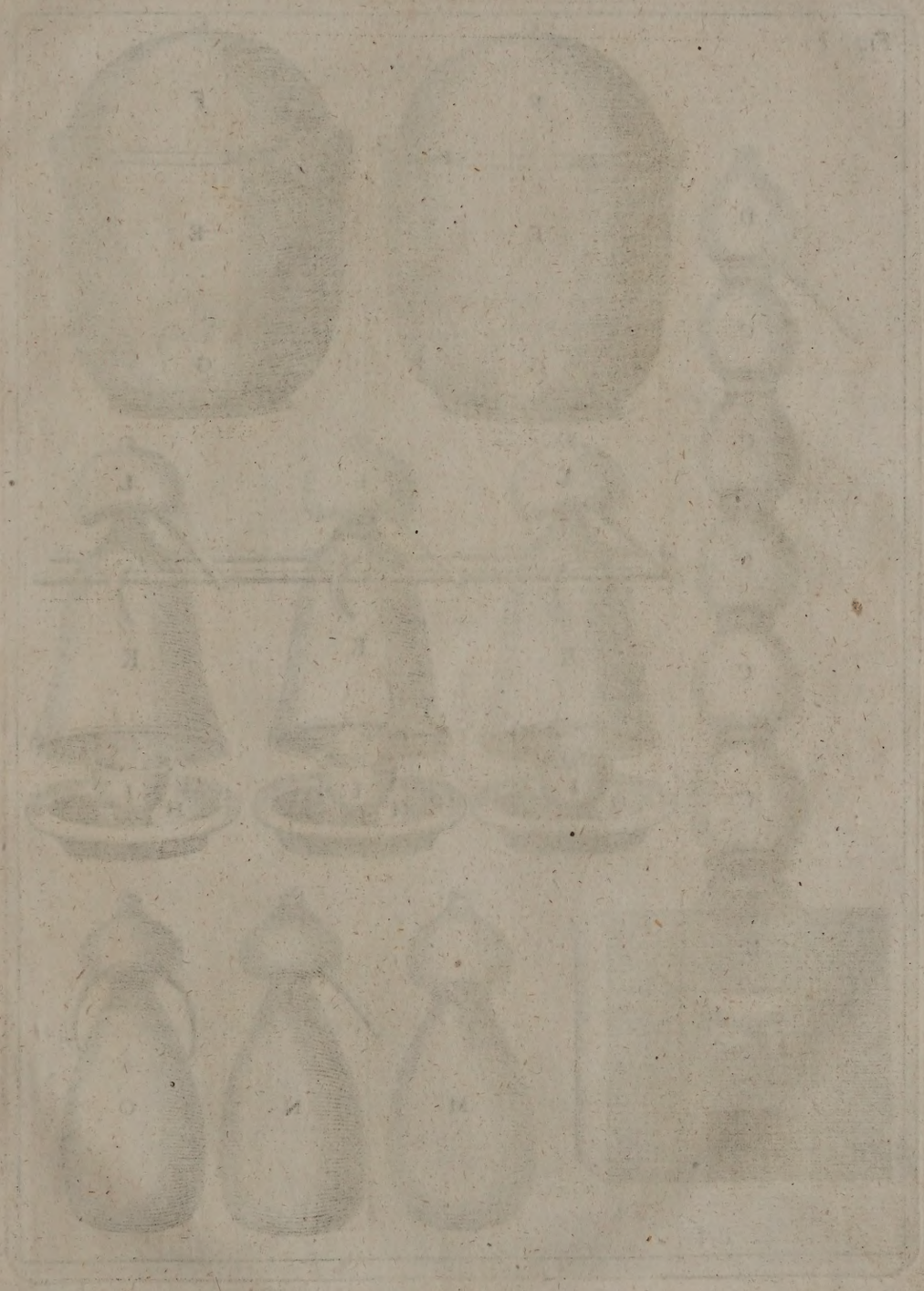


Fig. 3

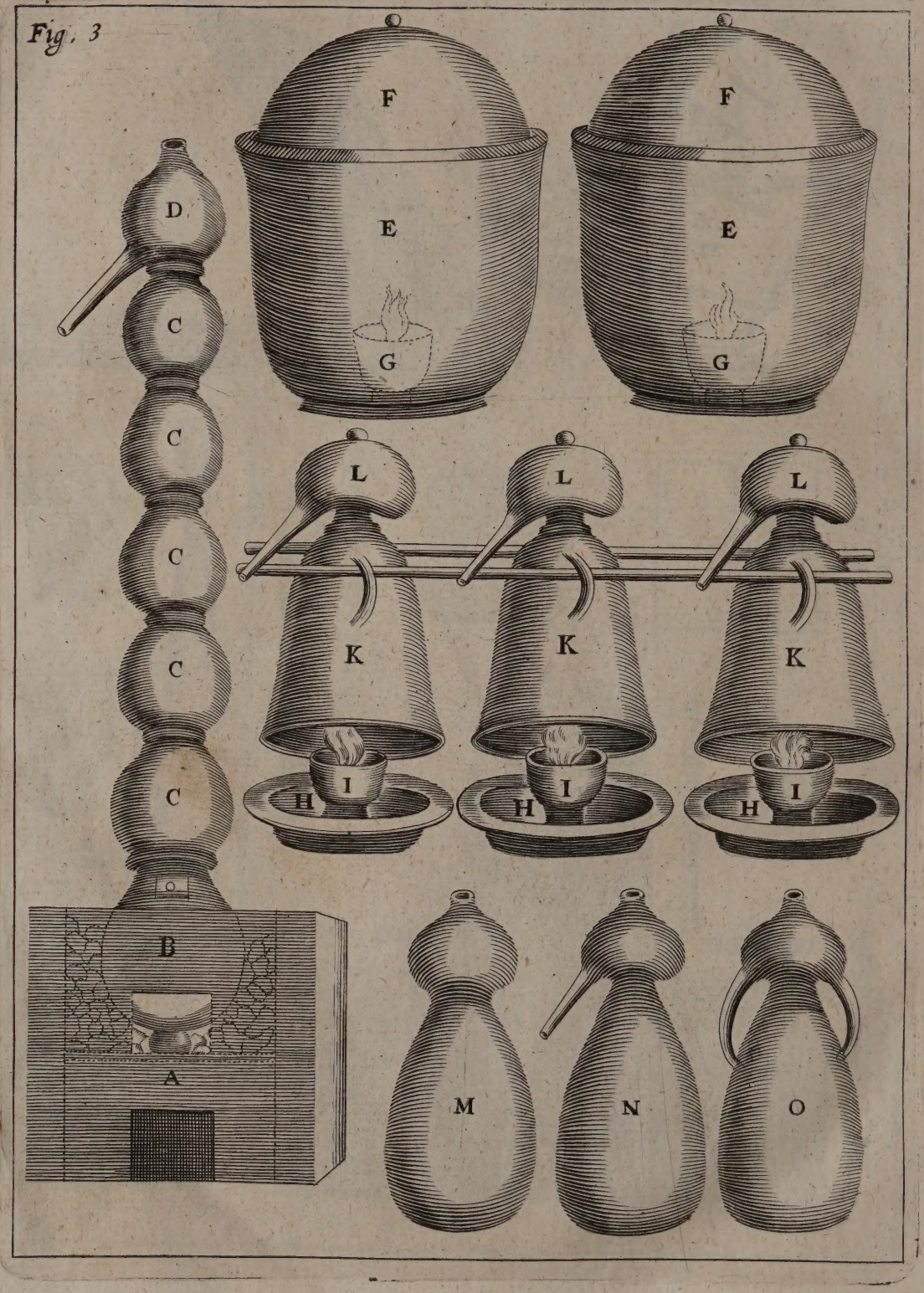


Fig. 4

Fig. 5
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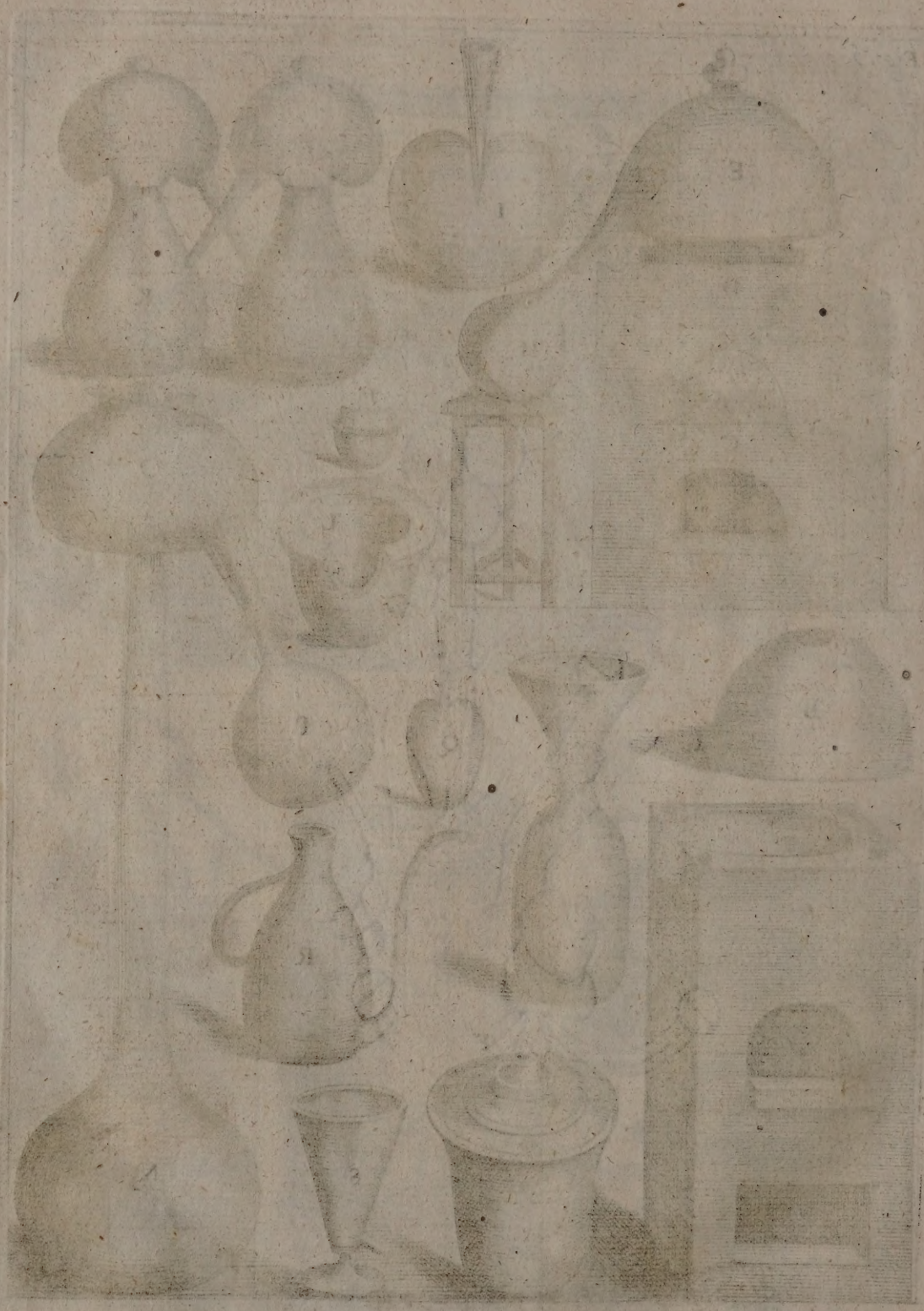

CHYMICALL CHARACTERS

Notes of Metalls

Saturne, Lead. ♄

Iupiter, Tinne. ♃

Mars, Iron. ♂

Sol, the Sun, Gould. ☉

Venus, Copper, Brasse. ♀

Mercury, Quicksilver. ☿

Luna, the Moon, Silver. ☾

Notes of Minerall and other Chymicall things

Antimony.

Arsenick.

Auripigment.

Allum.

Aurichalcum

Inke.

Vinegar

Distilld Vinegar.

Amalgama.

Aqua Vitæ

Aqua fortis, or Separatory water

Aqua Regis or Stigian water

Alembeck.

Borax

Crocus Martis

Cinnabar

Wax.

Crocus of Copper or burnt Brass

Ashes

Ashes of Harts ease

Calx

Caput Mortuum

Gumme

Sifted Tiles or Flower of Tiles

Lutum sapientiæ

Marcasite

Sublimate Mercury

Notes of Minerall and other Chymicall things

Mercury of Saturne.

Balneum Mariæ. MB

Magnet.

Oyle.

To putrifye

Realgar.

Salt Peter.

Common Salt.

Salt Gemme.

Salt Armoniack.

Salt of Kali.

Sulphur.

Sulphur of Philosphers.

Black Sulphur.

Soape.

Spirit.

Spirit of wine.

To sublime.

Stratum super Stratum or Lay upon lay

Tartar

Tutia

Talck

A Covered pot

Vitriol

Glas

Vrine

Notes of the fource Elements

Fire.

Aire.

Water.

Earth.

Day.

Night.

FINIS.

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